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Policy Implementation Strategies:
State Education Policy Influence on Student Diversity in Dual Credit Programs

A Capstone Project
Presented to
The Faculty of the Department of Education
Governors State University

In Partial Fulfillment
of the Requirements for the Degree of
Doctor of Education: Interdisciplinary Leadership in Higher Education Administration

by
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April, 2021

POLICY IMPLEMENTATION STRATEGIES:
STATE EDUCATION POLICY INFLUENCE ON STUDENT DIVERSITY IN DUAL
CREDIT PROGRAMS

by

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DEDICATION

This Capstone Project is dedicated to my husband and children.

With you all by my side, anything is possible.

ABSTRACT

Horton, Alexandra, *Policy Implementation Strategies: State Education Policy Influence on Student Diversity in Dual Credit Programs*. Doctor of Education (Interdisciplinary Leadership in Higher Education Administration), April, 2021, Governors State University, University Park, IL.

This research consisted of a qualitative study grounded in policy implementation theory aimed to discover how different education policy implementation strategies influence student diversity in dual credit programs in Indiana. This study intended to illuminate the policies, people, and places that shape how implementation unfolds and how interactions among them help to explain implementation outcomes within Indiana dual credit partnerships. 83% of Indiana higher education institutions accredited through the National Alliance of Concurrent Enrollment Partnerships (NACEP) or the Dual Credit Accreditation Program (DCAP) participated in a survey and individual interviews.

Results concluded that state education policies do influence program procedures, but they may not have as great of an influence on student diversity within dual credit programs as education policymakers may expect. Some state education policies directly relate to dual credit programs, such as the HLC dual credit educator credentialing requirements and the full dual credit tuition waiver for students that qualify for Indiana's Free and Reduced Lunch program. However, others may be influencing dual credit program procedures more indirectly. Recommendations of practice for dual credit administrators and other school leaders would be to collect specific demographic data from dual credit enrolled students to be stored and evaluated on annual and longitudinal basis.

KEY WORDS: Dual credit, Education policy, Student diversity, Socioeconomic status, Low-socioeconomic, Program procedures.

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First and foremost, I would like to thank my husband, Steve Horton, for always serving as my driving force and never allowing me to give up, even during the most difficult of times. His endless support and empathy throughout my education has meant the world to me. Our journey in life together started very early, so to say my education has been a long process would be an understatement. He has been by my side from the moment I first stepped foot on a college campus in 2009 and I am so grateful to still have him standing next to me celebrating the completion of this degree in 2021. This moment marks a significant milestone in both of our lives and I am proud that we have been able to experience it together. I would also like to thank my children: Chase, Leigha, Maverick, and our newest little baby due to arrive in a few short months, for inspiring me every day to be the best version of myself. Although having the honor of hearing myself being referred to as Dr. Horton will be an exciting and proud time in my life, hearing you call me Mom will always be my favorite. I am so proud of the effort you all put forth in your academics, athletics, and relationships and I am confident that those traits will carry you very far in your futures. The four of you have made this adventure one worth taking.

Next, I would like to thank my Mom, Dad, Mother-in-law, and Father-in-law. The support that you have all provided throughout various moments during this process had such a positive impact on me and my family. Your encouragement helped me to persevere through some challenging moments over the past few years as both a student and a mother. Finally, I want to acknowledge my Capstone Committee: Dr. Marlon Cummings, Dr. Matthew Cooney, and Dr. David Conrad for their support and guidance throughout this doctoral journey. I am appreciative of your passion for educational leadership and your dedication to coaching all of your students in how to be ethical leaders in their fields.

PREFACE

This basis for research originally stemmed from my passion for helping young adults better plan their educational pathway to achieve their academic goals. As more careers require a college education, I felt a duty to assist our youth in ways that could better streamline their educational progress toward attaining a college degree.

My experience navigating college as a teen mother is what initially sparked my interest in dual credit programs. If more students were able to actively participate in dual credit programs in high school, while simultaneously earning college credits toward their degrees, they would be able to accomplish their educational pursuits in a more efficient and timely manner. They would also be setting themselves up for greater financial success post college graduation, as the money they saved taking dual credit courses could be put toward other life necessities. There is no doubt in my mind that had the opportunities to participate in dual credit programs during my high school career been available, the adversities I faced during college as a teen mother would have been much less.

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CHAPTER I: INTRODUCTION

The landscape of American education is unending in its evolution, where the intersection between K-12 education and higher education is becoming more progressive in its complexities and convolutions. As the workforce demands more prospective employees to be college degree holders or possess accredited certifications, secondary institutions are beginning to reform their academic curricula to better reflect the advanced expectations. Secondary education institutions are thus discovering and innovating vertical articulation strategies that merge the traditional secondary education curricula with curricula from the higher education level. These radical vertical articulation strategies have eventually come to be known as dual credit programs (Education Strategy Group, 2017). Dual credit programs consist of courses that provide college level rigor and standards to secondary education students. Dual credit programs allow secondary education students the opportunity to engage with college level curriculum paired with the expert teaching and classroom management strategies of secondary education professionals. In addition, secondary education students enrolled in a dual credit course will earn college credits on their academic transcripts, regardless of which partnering higher education institution they acquired those credits from.

Advocates of dual credit programs strive to implement statewide strategic plans, focused on the equity of dual credit programs. The dual credit equity agendas build upon a large body of research that proves dual credit programs better prepare students from diverse backgrounds for a higher education, including those facing socioeconomic challenges that may not have the means to afford a college tuition (Zinth & Barnett, 2018). Although dual credit programs were initially designed to challenge high achieving students, research has shown that there is a greater and more positive impact on dual credit students from low-socioeconomic backgrounds' success in

their matriculation to and graduation from a college degree program (Short & Eadens, 2019). One of the reasons for these increased success rates of low-socioeconomic students in college matriculation is the major costs that they can save by enrolling in dual credit courses.

A conscious effort toward equity improvement is essential for establishing more successful outcomes for diverse sets of students (race, ethnicity, and socioeconomic status) enrolled in dual credit programs. Dual credit advocates are primarily interested in the extent to which dual credit programs can serve as a means to improve postsecondary outcomes for low-socioeconomic individuals (Bragg et al., 2006; Hoffman et al., 2008). Some advocates even propose that creating more equal and equitable access to dual credit programs may help mitigate SES gaps in college outcomes (Dual Enrollment in Texas, 2010; Hoffman et al., 2008). However, because there is no nation-wide implementation method for how higher education and secondary education institutions should partner to fund and supply dual credit programs, many low-income students are actually being neglected equitable access to dual credit programs (Patrick, 2019, para. 3). Dual credit programs may be a valuable strategy in vertically articulating curriculum between secondary education and higher education, but there are various factors, such as state policy differences, that may make it difficult for traditionally disadvantaged school districts to implement programs as effectively as more advantaged districts.

A growing body of research shows that because of the recorded data on how dual credit programs expand college access for low-socioeconomic students, there has been an observable increase in policy makers' interest in dual credit programs. Dual credit programs fall under both secondary education and higher education governing and administrative bodies, attributing them as being a significantly complex policy issue (Zinth & Taylor, 2019, p.104). Policymakers are also recognizing the impact they can have on dual credit programs and their community's

educational advancement statewide. This realization generated an influx in policy makers overall interest in developing policies that will help statewide education institutions and dual credit programs thrive. It is this initial policy design that influences the policy implementation strategies utilized within dual credit partnerships. These implemented strategies thus influence the diversity of students enrolled in the dual credit programs. For the purpose of this study, the researcher only be researched dual credit programs and state education policies in Indiana. Narrowing the study to a single state allowed the researcher to obtain a more comprehensive understanding of education policy implementation strategies utilized within Indiana dual credit programs.

Understanding Dual Credit in Indiana

To provide clarity on the college credit program language utilized within some of the Indiana state education policies, the researcher first discusses the primary differences between dual credit programs and advanced placement programs. An academic program, offered to secondary education students that is commonly compared to dual credit programs, is the Advanced Placement program, predominantly referred to as AP courses. When secondary education students enroll in a dual credit course, they automatically earn the college credits on their transcripts, regardless of their grade. Students that enroll in an Advanced Placement course, on the other hand, must earn a B or higher grade and pass the comprehensive exam with a score of 3 or 4 at the end of the course. However, this still does not guarantee that a higher education institution will award that student with college credits for that AP course. Dual credit courses can best be described as the method used by a traditional college student when earning college credits upon their enrollment in a college course on campus. The research in this study focuses on dual credit only.

One of the greatest benefits of dual credit programs, in conjunction with low-socioeconomic student college matriculation and dual credit programs, is the substantial amount of money that families can save. Schachter (2014) explained that families can save hundreds to sometimes thousands of dollars on college tuition costs by registering their children in dual credit courses while still completing their secondary education. For example, a student can enroll in a dual credit course through Purdue University for approximately \$75.00 - \$100.00 compared to the \$1,000 cost of the same course if a student were to take it on the college campus (Purdue University, 2020). This additional savings is momentous for low-socioeconomic families, as it allows their child a chance to earn a college education, without the college price tag. Students from an Ohio school district saved over one-hundred-million dollars in college tuition costs, collectively, by enrolling in dual credit programs while still completing high school (Loveland, 2017). Through enrolling in dual credit courses, families are able to accrue financial backing to support their child's pursuit of a higher education. This financial backing increases their child's likelihood to successfully matriculate to and graduate from a college degree program. More importantly, the dual credit student is able to earn a substantial amount of transferrable college credits while still completing their secondary education program.

Although dual credit students have the potential to save an extensive amount of money, depending on the policies enlisted by the higher education and secondary education dual credit partners, families may be required to pay out-of-pocket with no tuition support or financial aid. This extenuating circumstance is an exemplar of a hurdle that many low-socioeconomic families may not be able to overcome. For instance, research proves that low-socioeconomic students are less likely to enroll and participate in dual credit programs, if state policies place tuition payment responsibility on the student and/or guardian compared to state policies placing the tuition

payment responsibility on the institution(s) or state (Short & Eadens, 2019; Veldman et al., 2019). When a state implements these policies, low-socioeconomic students may find themselves at a disadvantage when seeking opportunities to pursue a higher education. State codes, policies, and laws therefore have a strong influence on the partnerships enlisted between higher education and secondary education, which in turn influences students' accessibility to the dual credit programs.

Shifts in the equity of dual credit accessibility can be observed through systematic analyses of Indiana state education policies. According to Indiana policy, each secondary education institution in the state is required to provide a minimum of two dual credit (Title 20, Article 30, 2017). By Indiana requiring education institutions to provide at least two dual credit course options for secondary education students, school districts are obligated to establish partnership with higher education institutions to ensure they fulfill this requirement. This may cause initial pressure on secondary education institutions. This state policy is ultimately benefiting students, as ample research proves the positive correlation between dual credit programs and college matriculation for low-socioeconomic students.

Another Indiana education policy clearly articulates that a dual credit course may replace a traditional course on the secondary education transcript. The replacement is allowed only if the course material is on the same subject matter with comparable rigor. This state policy is beneficial for both students and secondary education institutions, as this allows students to follow a traditional secondary education schedule with little to no disruption of their secondary education graduation requirements. Indiana also offers higher diploma distinction by incorporating education policy that states dual credit courses count as a course satisfying academic honors or another special diploma requirement (Title 20, Article 30, Section 10, 2017).

Secondary education Indiana students enrolled in multiple dual credit courses are also more likely to earn a high school diploma, graduate with a high school diploma with a higher distinction, and/or enroll in college full time compared to their peers who did not participate in dual credit programs (Karp et al., 2007). Thus, Indiana students not only benefit from intellectually stimulating curricula within a dual credit program, but are also distinguished as a more advanced student on their high school transcripts for successfully completing dual credit courses.

It can be observed that state education policies may have a direct influence on the dual credit partnership strategies implemented within various dual credit partnerships. For example, Illinois education policies do not incorporate specific legislation directing education institutions to provide dual credit courses to secondary education students. School districts from low-socioeconomic regions may therefore be less likely to take on the task of partnering with higher education institutions to provide dual credit courses. On the other hand, education institutions from high-socioeconomic regions may be more willing to establish a dual credit partnership. High-socioeconomic school districts may be more likely to partner because they might have greater access to funding opportunities as well as have a larger pool of qualified instructors to teach their dual credit courses. It is unmistakable that dual credit programs offer many benefits to students, such as increasing access to college academia for low-socioeconomic students and contributing to students' abilities to earn high school diplomas with higher distinction. However, the influence of state education policies on dual credit partnership strategies can also seriously detriment the enrollment of diverse sets of students in dual credit programs.

Policymakers have the ability to access state dual credit data systems to identify inequities in access, participation, and outcomes, using this information to create state-level

education policies. In a report by the Education Commission of the States (2019), the data collected concluded that dual credit partnerships were actively collaborating in all fifty states, with forty-nine of those states having adopted education policies to support dual credit programs at the state-level. The states developing new dual credit education policies intend to decrease the inequity gaps of the dual credit programs. However, there is a significant lack of data and research that tracks the influence the newly developed state education policies have on the dual credit student diversity, which is a component this study aimed to investigate in Indiana.

Purpose, Audience, and Stakeholders

Researching the influence of state education policies on dual credit partnerships was essential to understanding the strategies that are successful in shaping education policies that encourage more student diversity (race, ethnicity, socioeconomic status) in dual credit programs. The study also addressed the rationale behind each participating institution's policy implementation strategies and the state policies that influenced those decisions. Through this research, it was learned how education institutions and policymakers choose to update state and/or institutional policies to encourage more student diversity in dual credit programs. From this knowledge the researcher determined that there must be increased cooperation among higher education institutions and that higher education institutions should be collecting more data on the demographics of students benefitting from dual credit programs. Further research on the topic may include evaluating other potential barriers such as type of course offerings, course interest, academic planning opportunities and student preparedness. Overall, an increase in cultural awareness of the students enrolling in each institution's dual credit program, particularly as it relates to funding, is essential to improve student access to dual credit programs.

The primary audience for this research included dual credit administrative personnel from higher education and secondary education institutions. Dual credit administrative personnel may have a more immediate influence on the implementation and/or revision of their institution's dual credit partnership strategies. The primary stakeholders for this research includes state policymakers, district Superintendents, and higher education dual credit administrators, as they may have a more direct influence on the revision and implementation process of current and/or new education policies to better support strategic decisions made within dual credit partnerships.

Problem Statement

Opposing many advocates of dual credit programs, some critics allude to the negative effects that dual credit programs may have on college matriculation gaps between high- and low-socioeconomic students. Educational researchers speculate that increases in the demands for accessibility to dual credit courses may have detrimental effects on students of low-socioeconomic backgrounds (Zinth, 2016). There is a perceived misconception that the more dual credit courses available, the better. However, when states do not have education policies that provide clear specifications or guidelines for aspects of dual credit programming, such as for funding, the dual credit partnerships could be placing financial burden on the students. In turn, high-socioeconomic families access may increase, but the gap in accessibility may also increase, as low-socioeconomic families may not be able to afford the additional financial burden of enrolling in more dual credit courses.

Varied tuition responsibility placement may be one cause of the difference in percentage of low-socioeconomic versus high-socioeconomic families' enrollment in dual credit courses. According to Indiana state education policy, low-socioeconomic students qualifying for the Free and/or Reduced Lunch program have their dual credit tuition waived, while other states'

education policies remain silent on tuition payment responsibility for low-income families (Indiana Commission for Higher Education, 2017; Zinth, 2018). It can therefore be hypothesized that there are more low-socioeconomic students in Indiana that enroll in dual credit courses in comparison to other states. This may be due to Indiana state policy stating that dual credit course tuition must either be fully covered or significantly reduced if students are of low-socioeconomic status. The distinct differences in how each state influences their education institutions, via state enacted education policies, in the support of families enrolling their high school aged child in dual credit programs is a consistent finding across all fifty states (Education Commission of the States, 2019). This observation makes state-level education policies ripe for continued speculation in their influence on the policy implementation strategies utilized within dual credit partnerships.

The primary purpose of this study was to investigate how state education policies influence dual credit partnerships and how their policy implementation strategies influence student diversity in dual credit programs. Data collected provided an opportunity to analyze the influence of state education policy implementation strategies on equitable dual credit accessibility for students from diverse backgrounds. Recommendations are provided for dual credit partnerships in developing and implementing clear education policies to encourage greater student diversity in dual credit programs, based on the results of the study.

Central Research Question

RQ1: How do different education policy implementation strategies influence student diversity in dual credit programs in Indiana?

Conclusion

It is vital for the continued growth and success of dual credit programs to obtain a more comprehensive understanding of the complexities that state education policy influences can create for dual credit partnerships. This study aimed to discover how different education policy implementation strategies influence student diversity in dual credit programs. By gathering and analyzing data on state education policy influences on the implementation strategies for dual credit partnerships, policymakers and administrators can revise and develop updated education policies to better support student diversity.

CHAPTER II: REVIEW OF LITERATURE/THEORETICAL FRAMING

Development of Dual Credit Programs

In a secondary educational setting, vertical articulation of curriculum is a method implemented to organize the sequence and continuity of learning within a given knowledge domain or subject across grade levels. In this context, vertical articulation is a strategic design of curriculum intended to teach students the groundwork needed to be successful in the grade level forthcoming. However, as demands for a post-secondary education increase, secondary education institutions are challenged to vertically articulate their curriculum with that of a traditional post-secondary undergraduate education. Curriculum specialists argue that sequencing undergraduate general education requirements so that appropriate senior-year courses are linked to postsecondary general education courses, better prepares students for success in college academia (Venezia et al., 2003). Thus, dual credit programs emerged more predominately within the educational landscape, as they provide secondary education students with more traditional college academic experiences.

Institutional Benefits of Dual Credit Programs

There are many institutional benefits to establishing dual credit partnerships. Dual credit program goals strive to reduce socioeconomic status gaps in student academic performance, as well as support post-secondary institutions in their accreditation and funding processes (Dual enrollment in Texas 2010; Hoffman et al. 2008; Lerner & Brand 2006). Higher education institutions are recognized for the number of students that enroll and then successfully graduate, making them more likely to receive state funding in addition to the national, regional, or special accreditation that they are seeking. However, an institution's interpretation of state education policies can influence the implementation and success of these programs. Institutions may

interpret education policies differently, which consequentially alters how each institution articulates their dual credit partnership strategies. The strategies implemented may then influence student diversity within the dual credit program.

Influence of Education Policy on Dual Credit Programs

The United States Department of Education, as well as state-level Departments of Education, have progressively reformed and created education policies that encourage the implementation of dual credit programs. As a result, dual credit courses are increasingly adopted in secondary education institutions, helping make waves in overall student academic development and preparation for higher education. In doing so, it is important to assess the equitable educational opportunities of these programs in relation to their influence on social class identity development and long-term academic achievement.

Dual credit programs provide college experiences and college credits for secondary education students, helping prepare students for greater success at the college level. Policymakers continue to suggest increasing dual credit opportunities to a more diverse set of students to alleviate the SES gaps in college degree attainment since they are typically offered at free or discounted rates (An, 2012). Creating a push for more students to obtain dual credits though is also due to statistics proving that high school students who earned three or more college credits, through a dual credit program, are nine percent more likely to obtain a Bachelor's degree (An, 2012). Due to the increased demand for more dual credit opportunities, education policymakers need to focus on developing statewide articulation agreements. Statewide articulation agreements will provide assurance that students will be able to transfer their earned college credits to different universities across the state (Cram & Bejar, 2019). Noting that these articulation agreements and education policies do not exist in all states at this

time, dual credit programs may be viewed as continuing to contribute to the inequity in access to higher education.

Despite the differences in state education policies, education practitioners still encourage education institutions to establish dual credit partnerships to provide more dual credit course opportunities for secondary education students. Secondary education students are thus increasingly guided by education professionals to enroll in more dual credit programs across the nation (Burns et al., 2019; Cram & Bejar, 2019; Nelson & Waltz, 2017). An's (2012) research discovered that although these state discrepancies remain predominant, most state dual credit programs tend to focus on regions and school districts where students often graduate high school and move on to attend high tuition charging institutions such as private and/or public out-of-state colleges and universities. To encourage the reduction in social class and socioeconomic barriers to college access and attainment, it is suggested that instead of focusing on student bodies that more commonly enroll at high tuition charging postsecondary institutions, dual credit policies need to concentrate on targeting low-income schools (An, 2012; Burns et al., 2019; Cram & Bejar, 2019; Rubin et al., 2019). If education policies on dual credit programs concentrate on targeting low-income schools, they will be able to more efficiently and effectively provide college credits to more diverse sets of students.

Bridging Secondary and Higher Education

Dual credit programs are observed as having a more substantial and positive impact on low-socioeconomic students in regard to postsecondary attainment and graduation. A suggested solution for dual credit partners and education policymakers is that education policies should ensure that dual credit courses are more broadly accessible to students from diverse socioeconomic backgrounds and previous academic achievement (An, 2012; Cram & Bejar,

2019; Zinth & Barnett, 2018, p.9). Varying formats of dual credit programs are also addressed as an opportunity to expand access to dual credit programs, such as including aspects of coursework incorporating: differentiated experiences, developmental coursework, transition courses, seminar or co-requisite, career pathways, student success or college-ready courses, summer bridge programs, college readiness brush-up programs, as well as providing on-campus experiences for dual credit enrolled secondary education students (Zinth & Barnett, 2018). Providing these as optional formats of dual credit course accessibility would allow program differentiation to appeal to and support more diverse sets of students.

Dual credit programs are unique in that they create a bridge between secondary education and higher education for students that participate in the program. As dual credit programs grow and develop, it is important for their continued success to assess implementation strategies that encourage and incentivize more diverse sets of students to enroll. Honig (2006) explained that implement ability and success are unified in that they are both the result of the relationships between policies, people, and places that shape what people can and will do. Therefore, the further development of dual credit programs relies on the discovery of how education policy implementation strategies influence program equity and encourage greater student diversity.

Indiana State Education Policies

Indiana education policies provide specific guidelines for establishing strategic dual credit partnerships to better support students. Having more specific clarification on policy implementation strategies allows for more opportunities for students of diverse backgrounds to participate in dual credit programs. For instance, Indiana Code 20-30-10-4 specifies that each public Indiana secondary education institution must provide a minimum of two dual credit course offerings. This particular code also specifies that dual credit courses must be regularly

offered to secondary education students for college credits and must be approved by the secondary education institution.

Additional guidance on dual credit partnerships in Indiana is provided through Indiana Code 20-30-10-5, which details how education institutions utilize dual credit courses as substitutes for the traditional high school course. This code stipulates that a secondary education institution may choose to replace the traditional high school courses with the dual credit courses on students' high school transcripts as long as the courses cover the same subject matter. However, in addition to covering the same subject matter, this education policy explains that the dual credit course must be met with equal or greater rigor in comparison to the traditional secondary education course it is intended to replace.

The Indiana Department of Education designed a policy from the National School Lunch, School Breakfast, and Special Milk program. The public policy awards free and/or reduced dual credit tuition to students who qualify for the free and/or reduced lunch program. The free and/or reduced tuition costs is applied through the higher education institution the student is enrolling in the dual credit course through. The guideline requires dual credit partners to provide free and/or reduced tuition cost for low-socioeconomic students as an attempt to decrease the equity gap.

Dual Credit Program Funding

Alongside education policies, dual credit program funding is an inherent barrier faced by many students seeking enrollment in dual credit courses. Funding issues can create program development and/or enhancement barriers for both secondary and higher education institutions seeking to establish more equitable dual credit opportunities, that cannot support the program without additional financial backing. Schachter (2014) explained that most states that can fund the tuition for dual credit courses offer families considerable savings of anywhere from \$800 to

\$1,000 in college tuition. Loveland (2017) described how in 2016 more than 52,000 Ohio high school students earned college credit while meeting their high school graduation requirements, jointly saving over \$110 million on college tuition. Evidently, dual credit programs save each student's families a significant amount of money - putting them in less debt than taking out loans or paying upfront for college tuition. This is all in addition to preparing students for success in their college academics.

When conducting this research, it was necessary to take into consideration the various funding opportunities that Indiana offers when supporting dual credit students immersed in the secondary and higher education sectors. One of the most common ways that states fund education is through legislative appropriation. Legislative appropriation means that the primary education programs are subject to discretionary budget decisions and economic cycles. Yet, even so, some states fund primary education programs through their constitutions while other states may use lottery funds or tobacco settlement dollars (Parker et al., 2019). The difficulty in assessing the public funding of education is that each state takes action as a separate entity from the others. This led to various education policies and implementation strategies concurrent with education equity issues.

The variances in funding availability and approaches creates much discrepancy and inconsistency throughout dual credit partnerships across the nation. Nelson and Waltz (2017) further elaborated on the inconsistencies of dual credit programs, by reviewing the various financial supports that low social class students have depending on the state in which they are a student. For instance, Nelson and Waltz (2017) discussed how majority of states provide some form of higher education funding, providing potential cost defrayment, for historically and contemporaneously marginalized and disenfranchised students. According to Nelson and Waltz

(2017), the potential of removing these financial barriers to underprivileged students is arguably a double edged sword because these students are most often underage and underdeveloped for exposure to such a rigorous college atmosphere. However, Veldman et al. (2019) disagreed by arguing the importance of social adjustment as a factor in lessening the socioeconomic achievement gap. Lower social integration, among students who experience low social class identity-compatibility, is a contributor through which disparities in academic achievement between low socioeconomic and middle to high socioeconomic students commonly arise. Therefore, it is important that typically underprivileged students are engaged in dual credit programs alongside their typically advantaged peers.

However, it is not enough for dual credit partners to simply encourage disadvantaged students to participate in dual credit programs, they must provide financial support for those students to enroll. From a financial standpoint, Karp et al. (2004) claimed that discovering methods to cover the cost of student enrollment in dual credit programs avoids the barrier of low socioeconomic students not having the same educational opportunities of and access to programs that their middle and upper socioeconomic peers do. Harris and Radunovich (2019) concurred as students of low socioeconomic status are generally expected to take a more active role in general life tasks, while higher-earning students do not. This leaves mid- to high-socioeconomic students with more time to focus on their studies, spend more time on campus participating in various activities, as well as having the ability to afford additional services such as tutoring or internships. As discussed, Karp et al. (2004) stated that if students are also expected to contribute financially, those from low-socioeconomic families may be unable to participate in those additional educational opportunities. There are two priority decisions that states must make when deciding on the funding components of dual credit programs, including: who is going to pay the

tuition and how state Average Daily Attendance (ADA) and Full Time Equivalent (FTE) funding streams will be directed (Karp et al., 2004). For most students, not having enough money to pay for college is a primary issue.

When students do not have financial support to take college courses, they are less likely to attain a well-paying professional role, continuing the vicious cycle of not being able to pull themselves above the low-income and/or poverty threshold. The gap in wages perpetuates the cycle of low-socioeconomic students and families having less representation in post-secondary institutions. This issue of funding thus propagates the significant rate of first generation and low-socioeconomic students dropping out after their first year of college (Ecute, 2019). Nonetheless, if dual credit programs remain limited for reasons including funding, students who are members of low-socioeconomic groups will still have the most to lose in regard to their pursuit of educational equity and postsecondary study access (Nelson & Waltz, 2017, p.3). Education policies need to provide direction on how partnerships can financially support their low-socioeconomic students to provide more equitable access to dual credit programs.

Secondary Education Public Funding

Public funding is an essential aspect to review when determining effective measures of education policy implementation within dual credit programs, as it uncovers the advantages and disadvantages of program support within each state. Public funding for primary education increased by \$256 million over the recent 2017-2018 fiscal year. However, with only a 3.42% overall increase in public funding, it remains the smallest one-year increase since 2012 (Parker et al., 2019). Indiana, for the FY 2020-2021 had a 4.7% increase in their total K-12 Education spending, “increasing from \$16.6B in the prior budget to \$17.4B in the current budget” (House Republican Policy & Ways & Means, 2020, p.2). One concern with fiscal year funding is how it

aligns with yearly student enrollment. In Indiana, public K-12 enrollment saw a 0.4% increase from 2017 to 2018 and another 0.1% increase from 2018 to 2019, but decreased by 0.4% from 2019 to 2020 (Indiana Business Research Center, 2020). Typically, to combat governmental funding shortfalls, many public primary school districts use fundraising strategies to raise money from parents such as: selling products, soliciting donations, charging fees for learning materials, athletics, yearbooks, extra-curricular activities, and other specialized programs (Hedges et al., 2019). Although Indiana may seem fiscally prepared for their public K-12 student enrollment for the FY 2020-2021, pressures for state funding on education shall persist with annual concerns over student enrollment growth in public K-12 education institutions.

Free Application for Student Aid

One method for securing a budget for dual credit programs is through the Free Application for Student Aid. High school administration can help establish this program budget, without defining a specific amount, by encouraging families to complete a Free Application for Student Aid. It is essential for parents to fill out and submit a Free Application for Student Aid (FAFSA) as it helps promote students eligible for a federal Pell Grant of any amount to a full scholarship. Another method that could allow the cost of enrolling into a dual credit program to lessen is if K-12 school districts incorporate dual credit courses that can replace traditional high school courses. Chumbley (2015) expressed how dual credit programs can help keep costs down as the courses are integrated into the standard K-12 curriculum. When the courses are integrated into the standard curriculum, they may be free for students and the school district, as states may then provide direct funding. When a dual credit program is fully state-funded within a secondary institution, the funds cover the course tuition fees and material fees for all students enrolled. When a dual credit program is partially state-funded a state may choose to provide funds for

students who are at a financial disadvantage. The state may choose to cover tuition costs, but not material fees, or some combination of the three for low-socioeconomic families who are below a certain income threshold. When a dual credit program is not state-funded, the secondary education institution is most likely to place the tuition and course material fee payment responsibility on the family.

Higher Education Public Funding

Funding for dual credit programs may also be offered to the higher education institutional partner. Higher education institutions receive their funding from sources quite different than secondary education institutions. Some sources of funding may include: net tuition revenue; state and local appropriations; private gifts, investment returns, and endowment income (PIE); state and local grants and contracts; federal appropriations, grants, and contracts; auxiliary enterprises; hospitals; and independent operations (Desrochers & Hurlburt, 2016). On average, states provided approximately \$299 per capita in higher education funding in 2017, remaining below levels of support prior to the Great Recession. The percent of tax and lottery revenue allocated to higher education declined as well, with states spending 8.2% in 1990 compared to 5.2% in 2017 (Tandberg & Laderman, 2018). When higher education institutions are denied state funding or have a decrease in state funding, they will seek additional avenues to support their educational programs, sometimes placing that burden on their prospective and current students.

To compensate for the increased lack in state funding and additional rising institutional costs, public higher education institutions across the United States have increased tuition and student costs. Higher education institution tuition costs have risen an average of 33% since 2008 resulting in an expected decrease in enrollment (Mitchell et al., 2016). Upon the largest one-year enrollment declines in 2013, with public community colleges being -4% and public Bachelor's

degree granting colleges at -2%, the amount of public funding increased by 5% at community colleges and by 1% at public Bachelor's degree granting colleges (Desrochers & Hurlburt, 2016). For example, one source of funding, specifically targeted for Illinois dual credit higher education partners, is the Dual Credit Grant (Office of Community College Research and Leadership, 2020). The Dual Credit Grant is a fund awarded to community colleges, by the Illinois Community College Board, to utilize as a means to expand their dual credit services and lower tuition costs and course fees for dual credit students. This is a method of funding that other states could significantly benefit from, when attempting to decrease equity gaps and/or increase student diversity within dual credit programs.

Dual Credit Program Funding Complexities

Although there are various funding methods that dual credit partners can utilize to support their dual credit programs, there are complexities with each one – sometimes these complexities are faced by the education institutions, whereas other times the complexities are faced by the students enrolling in the programs. Karp et al. (2004) offered a simplistic overview of the complexities of Average Daily Attendance (ADA) and Full Time Equivalent (FTE) funding in regard to dual credit programs. ADA funding is described as addressing the costs of the dual credit program to the student, whereas FTE funding addresses the funding streams for secondary education and postsecondary institutions. The combination of ADA and FTE funding creates an even more complicated and varied result (Karp et al., 2004). When states face funding shortages they risk losing their dual credit programs statewide, such as how Massachusetts' dual credit programs were eliminated in the year of 2001. It was not until 2008 that Massachusetts' dual credit programs were restored and made available to the most disadvantaged school districts (Massachusetts Department of Higher Education, 2020). Legislators and congressional leaders

choosing to eliminate dual credit programs across the state is a potential risk that all states could find themselves facing if under significant fiscal pressure.

Dual Credit Program Funding Recommendations

An overall recommendation for dual credit programming, to prevent further detrimental impacts from potential crises, is to provide more direct state funding to dual credit programming efforts. An example of this would be the Dual Enrollment Task Force for universal access to college in high school that was created through Act 128 of the 2019 Legislative Session in the state of Louisiana (Board of Regents, 2020). This task force was able to obtain an allocation of \$5.5 million in the Governors proposed budget for support and potential funding of, “dual enrollment pilot programs aimed at increasing the capacity of teachers to deliver college-level courses as well as student and counselor capacity building (\$3.5 million). The budget also included funding for mobile labs for community colleges (\$2 million) to bring career and technical training directly to high schools with a priority given to rural communities (Board of Regents, 2020). The task force recommended establishing a statewide dual credit framework to address uneven participation especially by low income and minority students. When states have a task force dedicated to understanding the complexities of their statewide dual credit programs, it provides more opportunities to advocate for direct funding on the grounds of thorough research of program benefits for diverse sets of students.

Dual Credit Implementation Strategies

Alongside funding, dual credit partnerships are expected to establish strategies to better connect the institutional dual credit stakeholders. During a time of increased remote and online learning and instruction, some partnership strategies that are being implemented between various institutions include: adding the higher education dual credit liaison as a secondary instructor to

create a co-taught style course; adding the higher education dual credit liaison as a collaborator to the online course; providing specific dates and times for secondary education dual credit instructors to meet virtually with a technology professional and the higher education dual credit liaisons in developing effective virtual instructional methods; and/or higher education dual credit liaisons providing supplemental supports to secondary education dual credit instructors to add to their new online course platform (Giazioni et al., 2020). However, the innovative methods and strategies for curriculum design and instructional presentation are being prepared by educators with little to no professional development and training in the world of technology. Education institutions need to be held accountable for the quality of instruction being provided to students of their institution if those students are expected to continue making course payments and earned grades with little to no flexibility.

Dual Credit Liaisons

One partnership strategy is the implementation of dual credit liaisons. It is essential to the success of dual credit programs that higher education and secondary education institutions establish dual credit leaders, also referred to as dual credit liaisons, within their institutions. Dual credit liaisons take action in guiding the academic departments towards achieving the ultimate vision and mission set forth by the University President, District Superintendent, and Institution Board. As a dual credit liaison, one must assess their subordinates and colleagues' motivation in the continuation of reaching the vision and mission to determine the best approaches and strategies in leading those individuals toward success. There are many different leadership approaches and strategies, rooted within specific theories, that can guide secondary and higher education institutions in efficiently reaching their long and short term dual credit goals. Although

there are various approaches to leading a dual credit program, a liaison may find that during the assessment of their dual credit program, a path-goal theory and approach may be best suited.

Path-goal theory can be described as an approach where leaders maximize follower satisfaction and performance through focusing on what motivates each follower. In other words, the motivating factors for each follower may vary, so the path-goal leader must ensure that he or she focuses their time on motivating their followers according to each follower's individual factor(s) of motivation (Northouse, 2016). Higher education institutions are constantly changing and adapting to align best with society's needs and demands. These changes present many challenges in differentiating between the diverse needs of one's subordinates and colleagues, which thus trickles down to students' needs in the dual credit classroom. Even more relevant, as older generations are retiring from their positions in various careers and younger generations are entering, the workforce is quickly becoming a large pool containing an assortment of individuals with diverse sets of needs and demands.

It is essential that the dual credit liaison is ensuring that dual credit instructors are understanding the specific needs their students are bringing in and subsequently sharing that knowledge with the partnering higher education institution. This collaboration protocol between the higher education dual credit liaison and the secondary education dual credit instructor will help to better develop the dual credit program and partnership as a whole. When a dual credit liaison approaches dual credit instructors and students, they must be cognizant of their individual motivating factors. Doing so will ensure that all stakeholders are equally determined to accomplish the mission and vision of the dual credit program instated by the higher education and secondary education partnership.

When encouraging a dual credit liaison to take a path-goal theory approach, there are some practices that may work better within a dual credit program setting. To best take action in the path-goal theory approach, Hall (2013) stated that liaisons must: first clarify the path of the dual credit program, such as making sure each dual credit instructor understands the mission and vision of the higher education institution; remove any obstacles that may be in the way of the follower from efficiently accomplishing the goal (i.e. the mission and vision of the institution) as well as increase follower rewards throughout the process (tailoring the rewards to each individual follower). House and Mitchell (1974) described this process as making the work more personally satisfying through an easier path and more rewarding journey overall. Just as path-goal theory relies on leaders focusing on the specific motivational factors of the followers, it also relies on the leader establishing the end goal as a process; a path. Evans (1970) clarified that the path will look different for every leader, follower, institution, and even situation because the capability and motivation, as well as the difficulty of and contextual factors of the situation can vary significantly. Through this cognizance of institutional variance, it can be determined that although the path-goal approach has been sufficiently theorized and recommendations for best practices are in place, there is no one size fits all strategy in its implementation. Instead, it emphasizes the notion that the dual credit liaison and their colleagues must communicate with one another regularly and transparently to uphold program integrity.

Effective communication mainly happens when administration and faculty operate in parallel with one another. Department specific administrators and faculty are typically focused on promoting their own goals and objectives rather than adhering to broader institutional purposes (Kuh, 1996). However, when approaching vertical alignment through the implementation of dual credit courses into the secondary education curriculum, this method of

departments promoting their own specific goals significantly contributes to overall institutional success. Keeling et al. (2007) claimed that that professors in any discipline have a greater sense of community and connection with professors in that same discipline in other institutions than with professors in other disciplines within their own institution. The involvement of department specific professors, also referred to as dual credit liaisons, developing deeper connections and a sense of community with secondary education teachers in the same discipline offers greater opportunity for a more seamless transition into incorporating dual credit courses through successful vertical articulation of core curricula.

In other words, when higher education institutions begin developing a vertically articulated curriculum between secondary education institutions within their dual credit programs it is common for administrators to work within their own specific department. For example, the Dean of College of Arts and Sciences would begin working on establishing a connection with the English Department Chairs at local secondary education institutions that feed into their college. The separation and division of work is necessary and must take place for a vertically articulated curriculum to be successful in the dual credit program plan for partnering institutions. The Chair of the dual credit program committee must lead the Deans of each specific department into establishing meaningful connections, as dual credit liaisons, at the local secondary education institutions that feed into their college.

By having the departments communicate with the secondary education administration faculty (i.e. Department Chairs) within their own field, the articulation of curricula will transition more seamlessly. Schachter (2014) explained that liaisons can help high school administrators understand what is needed for college readiness. A dual credit program where high school teachers and college faculty collaborate on articulating the secondary and postsecondary

curricula positively impact the success of students within the programs. Faculty and liaison site visits can also ensure that dual credit courses offered to high school students are of the same quality and rigor as the courses offered on campus. Nonetheless, it is important that both the dual credit instructors as well as the college faculty liaisons communicate regularly about course expectations and planning.

Dual Credit Student Supports

Support and communication offered to the dual credit instructors and liaisons is an element of dual credit program success that cannot be slighted, but the same value needs to also be placed on supporting students within the dual credit programs. Helmer (2017) expressed the importance of dual credit students having access to academic supports that traditional college students have. For instance, dual credit students should have access to the academic library, tutoring, and counseling services provided on the college campus. Providing these services is a key component to helping dual credit students meet the college-level standards set within the dual credit programs. Having access to these resources is crucial to the success of secondary education students working with college level materials and curriculum. This ensures that dual credit students will obtain a more realistic and practical perspective of what it takes to achieve academic success at the post-secondary level and better prepare them for life as a college student.

In addition to offering library, tutoring, and counseling services to dual credit students, the post-secondary institution should also provide dual credit students with advising support to ensure that the courses they are registering for will transfer into their desired post-secondary degree program as seamlessly as possible. Helmer (2017) claimed that as part of their accreditation as degree-granting authorities, students should receive advising support through the higher education institution to put them on a path to complete college. These services can be

provided in a virtual format, so that the secondary education students do not need to be physically present on the college campus to receive the services. The virtual implementation method of support services may also allow more readily accessible opportunities for students from diverse backgrounds, much like many have experienced during the Coronavirus pandemic. This combination of services provides additional opportunities for dual credit students to engage with higher learning programs and/or initiatives as well as opportunities to socialize with staff members of the higher education institution in a way that models the traditional college student experience. The socialization aspects of the dual credit program will help to shape the student identity and self-efficacy of each individual dual credit student prior to and upon matriculation to college fulltime.

Student identity and self-efficacy are important factors in determining a student's success within college, therefore they can also serve as indicators of student success within dual credit programs. Craig et al. (2017) explained that socialization processes provide a pathway for students to develop their sense of identity as well as the process they implement and cultivate to establish their values, norms, knowledge, skills, expected roles, and culture. It is also suggested that forming a strong identity early in a student's academic career is shown as enabling a successful transition to professional practice, motivating, and instilling confidence in the beginning stages of his or her career (Craig et al., 2017). Galles et al. (2019) concurred with this notion by claiming how research suggests that an early detection of self-identity leads to increased behavioral and emotional regulation, increased coping, and decreased symptoms of depression and anxiety; all of which correlate with more positive experiences within the workforce. Roska et al. (2017) expressed how it is necessary for students to engage in the practices of self-identity programs during their college education because it is during early

adolescence that individuals begin making transitions into adulthood and start making decisions about their personal values and beliefs that are independent from their parental influences. This further confirms the holistic benefits that adolescent dual credit enrolled students will receive through the implementation of such practices within the dual credit program.

Not only will obtaining a better sense of identity and self-efficacy lead to greater success rates for students in dual credit programs and college, but it will also benefit students who desire to enter into the professional workforce. Loh (2016) confirmed these remarks in explaining how graduates entering the workforce within a more global economy will be expected to collaborate with diverse teams. Sundt et al. (2017) expressed how essential it is for higher education institutions to immerse themselves in culturally engaging environments. The dissonance that students experience between their culture and the dominant culture can create substantial barriers for their self-identities, academic success, and employability hindering post-graduates from developing empathetic and collaborative attitudes and behaviors in their future interactions. McGuigan (2018) agreed that preparing students for the diverse settings they will experience in the workplace is essential to their post-graduate success. These initiatives must be immersed within the specific coursework of various disciplines with the goal of equipping students with the skills to critically assess rhetorical and cultural situations. Moreover, when students engage in these practices within dual credit programs, they will be better equipped to manage college academia and the workforce compared to their peers who did not participate in dual credit programs.

Through participation in the programs provided by the partnering higher education institution, dual credit students can be expected to develop and advance their critical cultural awareness. Critical cultural awareness is the ability to critically evaluate on the basis of explicit

criteria perspectives, practices, and products amongst diverse sets of cultures. In all practicality, college campuses are the prime environment to establish programs that address biased attitudes and prepare young adults to function in today's diverse society. As McGuigan (2018) described, colleges and universities are microcosms of society. Dual credit academic programs can promote intellectual growth and have the ability to encourage knowledge of human differences and an appreciation for diversity, much like a student affairs department achieves at the higher education institution (McGuigan, 2018). Dual credit programs, therefore, can become a key to integrating identity-based student diversity initiatives at the secondary education level.

As one of dual credit programs' goals is to encourage greater equity within the programs, student diversity becomes a prevalent topic. To successfully lead identity-based student diversity initiatives, secondary education and higher education dual credit professionals, must be knowledgeable about and understanding of the ways that minority students are disadvantaged and disenfranchised within colleges and universities (Stewart, 2016). Dual credit education professionals must also be aware of the barriers that minority students face that work against them in their quest for equality and equity within their interactions on and off the college campus. When the dual credit education professional develops this particular knowledge and skill set, they will be better equipped to explain to critics the overarching value that identity-based student development initiatives have on dual credit enrolled students.

Therefore, it can be argued against the critics that identity-based student development is not wasteful for dual credit students, but instead is contributing to the growth of skills that critics most desire college students to obtain. When a dual credit student is more mindful of their self, they develop a clearer vision of their future. Thus, identity-based student development programs ultimately help students establish their vocational-identity. Vocational identity can be referred to

as an image of clarity of one's goals, interests, personality, and talents (Galles et al., 2019). When a dual credit student has higher levels of vocational identity, a multitude of positive career-related experiences such as: career exploratory behavior; less negative thinking; higher levels of self-efficacy related to college plans; and psychological well-being occur (Galles et al., 2019). It is through the integration of mindful practices in regard to a student's self- and vocational identity, that ultimately enhances their holistic well-being both on and off campus. This is why integrating academic and mental health services is integral to the holistic success of dual credit students and dual credit programs.

Instructor Preparedness

It is also vital to ensure the integrity of the dual credit programs by confirming that high school instructors approved to teach the dual credit courses have: college professor credentials, use college syllabi, and communicate with dual credit liaisons to ensure the classes offered are meeting the colleges' set standards. It is essential to the success of the dual credit programs that the instructors teaching them are as qualified and as credentialed as any college professor would be for that specific content area. Requiring credentialed and qualified dual credit instructors matters because individuals who have obtained a Master's degree in their specific content area have proven their ability to think critically and defend their work in an extensive format. A Master's degree requires individuals to do thorough and extensive research, on their own, and develop either an in-depth thesis paper or complete a comprehensive exam over the materials from the entire program. Only through this process does an individual prove that they are capable of providing and relaying accurate, quality, and elaborate information and instruction that a college professor or other field expert would be expected to give.

When compliance with these instructor requirements is unmet, problems can quickly arise. As education professionals discovered upon school closures due to the Coronavirus, issues of instructional modality compliance began when students and/or dual credit instructors did not have access to remote learning materials such as internet, laptops, or a designated online instructional platform. Many dual credit instructors at the secondary education level did not have access to these services and devices. The American Library Association recognized the critical need for access to library and information resources, services, and technologies by all people, especially those who may experience economic distress, cultural or social isolation, physical or attitudinal barriers, housing status, barriers to equal education, and employment, amongst others (Huffman et al., 2019). Higher education institutions continue to face these instructional compliance issues with their secondary education partners, attempting to avoid further disruption of the dual credit courses' curriculum. To do this effectively, higher education institutions need to address the issue with their secondary education partners to establish necessary supports for those involved with dual credit coursework for the present academic term.

This establishment of supports could include the higher education institution providing loaner laptops to all dual credit students and instructors at the secondary education level, who do not already have access to a personal device or a device provided through the institution in which they work fulltime. Another issue that can be of concern is that some secondary education instructors have never been supported with training in online teaching. Lack of training in online teaching becomes a primary issue for the dual credit program if the course has to remain and/or return to a remote learning setting. A lack of training and self-efficacy in the dual credit instructor's technology-based instruction, confirms that students may no longer be receiving the quality education demonstrated within a college-level course.

Dual Credit Implementation Strategies Conclusion

Strategies for implementing dual credit programs include: the addition of department-specific faculty liaisons, student supports, and instructor preparedness. These strategies are all essential components of the successful implementation of a dual credit program. When higher education faculty are involved with the dual credit program as liaisons, they will be able to provide support with syllabus development, core assessment materials, and assist with setting the assessment expectations and grading criteria. Student supports are also all a valuable component of a dual credit program's success, as this provides students with similar experiences to what they would receive as a full-time college student. Instructor preparedness is a third dual credit implementation strategy that has a direct influence on the success of dual credit programs. Dual credit instructors need to acquire the necessary credentials to teach diverse sets of students in courses with college-level rigor and expectations. All of these implementation strategies have significant value in the success of dual credit programs and the students within them.

Dual Credit Program Access Inequity

Dual credit programs, also referred to as dual enrollment and/or concurrent enrollment programs, are an upward trend within secondary education and higher education partnerships that are continuing to grow substantially across the nation. Dual credit programs were initially designed to challenge high achieving students, however, research has shown that there is a greater and more positive impact on students from low-socioeconomic backgrounds' success in applying to and graduating with a college degree when they were active participants in a dual credit program (Martinez et. al, 2018; Short & Eadens, 2019; Zinth, 2018). These programs, unlike other comparable college credit earning programs, are articulated primarily through a secondary education institution and a partnering higher education institution (Martinez et al.,

2018). As Burns et al. (2019) claimed that the original intent of early dual credit programs was to bridge students from high school to college. However, many stakeholders now turn to dual credit programs for additional reasons such as to help offset the growing expense of college degree programs and to improve the matriculation and graduation rates of college students. Yet, there is minimal literature addressing how state policies impact the accessibility of the dual credit programs for students of different socioeconomic backgrounds. Previous research conducted by Zinth of the Education Commission of the States (2016), highlighted the vast differences upon each states decisions in providing policies or legislation recommending how to cover the cost of tuition for dual credit programs. In their study, Zinth and Barnett (2018) highlighted that the present state requirements across the nation may be unintentionally undermining the efforts being stressed to enlist more high school students in a more efficient pathway to college. In many instances, a secondary education institution may partner with more than one higher education institution in order to provide their high school students with more dual credit course options and opportunities.

Providing More Dual Credit Course Options

When secondary education students are provided more dual credit course options, they ultimately have the ability to enroll in more dual credit courses during their secondary education experience. For example, a student may be able to enroll in a dual credit English, Math, and/or Science course, but if their secondary education institution is able to acquire more dual credit course options, that student might be able to enroll in two dual credit English courses (i.e. Dual Credit Advanced Composition and Dual Credit Advanced Composition II), multiple dual credit Math courses (i.e. Dual Credit Advanced Algebra, Dual Credit Statistics, and Dual Credit Advanced Geometry), or even enroll in multiple dual credit Science courses (i.e. Dual Credit

Biology, Dual Credit Anatomy, and Dual Credit Forensics). This is fiscally responsible of the student when enrolling in multiple dual credit courses, as they are saving a significant amount of personal funds on tuition costs and course fees in comparison to what they would have to pay as a traditional college student taking the same courses on campus. It is also academically responsible of the secondary education student to enroll in multiple dual credit courses, as they are now guaranteeing themselves that they will graduate high school with more college credits that they can then transfer into their desired college degree program.

Dual Credit Transferability

Credit transferability is a fundamental component of successful dual credit programs. When students enroll in a dual credit course, they are typically planning on utilizing those college credits to transfer into their desired college degree program. A 2019 report claimed that only 19 states do not require their higher education institutions to accept all of a student's dual credit courses during their transfer to their institution. However, those same states have policies that require higher education institutions to accept the college credits for those courses taken through their institution as a dual credit class (Zinth, 2019). Therefore, dual credit students can be assured that their college credits will be widely accepted within the higher education institutions of at least 31 different states and will be guaranteed credit transferability in the other 19 states if they took a dual credit course through that particular higher education institution.

Academically speaking, the benefits that students obtain from earning college credit through dual credit courses are astounding. In some states, such as Minnesota and Texas, students are graduating from their secondary education with anywhere from one semester of college completed all the way to having earned an entire Associate's degree (Burns et al., 2019). Earning this many college credits while in high school has a tremendously positive influence on

the matriculation of secondary education students to college. Critics may be concerned that this will result in students spending less time at the college institution. Research argues that students are not only more likely to complete a college degree and/or matriculate into a graduate program if they previously participated in dual credit programs, but that dual credit programs also recruit students who may have never considered college to begin with (Amour, 2019). Essentially, when high school students enroll in dual credit courses, they can save themselves from student loan debt, shorten their time as a college student, and increase their odds of completing a college degree program or matriculating into a graduate program.

Diverse Student Body

The students that may not be classified as the traditional high school or college student, but can significantly benefit from dual credit programs, include students who are homeschooled. Loveland (2017) explained that state-funded programs, such as dual credit programs, allow high school students to learn without leaving their building and are a great fit for homeschooled students. From an institutional perspective, this is fiscally responsible, as the higher education institution is acquiring student enrollment funds without needing to supply a college professor for those particular dual credit courses. It is also fiscally responsible for secondary education institutions, as the school district can acquire additional state funding for every student enrolled in a dual credit course within their high school. Additionally, families who homeschool can financially benefit from dual credit programs as well, because their child has the ability to attend their local high school or use an online platform to take the dual credit courses offered. Although the potential benefits of dual credit programs for all stakeholders is noteworthy, there is still concern over dual credit programs' creation of equitable opportunities for students of diverse backgrounds to enroll and succeed.

Several proponents of dual credit have pushed forth an equity agenda where dual credit programs reach a more diverse set of students. These proponents are interested in the extent to which dual credit can serve as a means to improve postsecondary outcomes for low-socioeconomic individuals (Bragg et al., 2006; Hoffman et al., 2008). Some advocates even propose that equal access to dual credit programs may help mitigate SES gaps in college outcomes (Dual Enrollment in Texas, 2010; Hoffman et al., 2008). Discovering potential solutions to providing more equitable access to dual credit programs may have the ability to mitigate socioeconomic gaps in college students. There is a substantial body of literature that states students are more likely to matriculate to an accredited, degree-granting higher education institution if they earned college credits through dual credit programs while completing their secondary education. A guided approach to creating more equitable opportunities for students to access, enroll, and participate in dual credit programs is needed across the states. State policymakers are therefore encouraged to implement language within their education policies that provides more clarity and specific guidance on how dual credit partnerships can support equitable access to their programs for students of diverse backgrounds.

Streamlining State Policy Language

States should first focus on streamlining the language within their policies and legislation to ensure that low-socioeconomic students are receiving an equitable opportunity to enroll and participate in dual credit programs. State policy makers can streamline their education policies by applying the language that successful states have already implemented. It is important that higher education and secondary education dual credit institutional partners understand the negative impact and disparities that a lack of clearly established guidelines and policies within their dual credit programs can create for students interested in participating. As each state in the

nation approaches and implements dual credit programs in drastically unique ways, there is an increase in the significant gap of student enrollment and participation due to socioeconomic status (Zinth, 2018). Low-socioeconomic students are less likely to enroll in and participate in dual credit programs, if the state decides that the tuition payment responsibility is placed on the student and/or family compared to states that place the tuition payment responsibility on the institution(s) (Short & Eadens, 2019; Veldman et al., 2019). Consequentially, when this occurs, the equity gap increases in the accessibility of dual credit programs for low- versus high-socioeconomic students. Thus low-socioeconomic students may continue to be at a disadvantage when seeking educational opportunities in their pursuit of a higher education.

Ultimately, placing higher expectations on institutions to provide more dual credit course options and/or enroll more high school students in dual credit may be producing a negative influence on dual credit accessibility for low-socioeconomic students. This is due to there being no guarantee that their tuition will be reduced or fully covered. Historically, equity audits have been utilized in curriculum assessments and state accountability systems, yet participation and achievement gaps by socioeconomic status persist in U.S. public schools. Researching the policy implementation strategies of dual credit partnerships is essential to understanding the strategies that most positively influence and encourage more equitable access to dual credit programs for diverse sets of students. Similar to An (2012), Zinth and Barnett (2018) offered evidence that students with low grades in their high school classes, more typically found in students from lower socioeconomic backgrounds, benefit to a greater extent than students from higher socioeconomic backgrounds due to their participation in dual credit programs and courses. Also, students who participate in and successfully complete dual credit coursework results in increased self-confidence and ability; directly and positively impacting the college student's social class

identity development (Burns et al., 2019). In all, the more opportunities low-socioeconomic students have to participate in dual credit programs, the more successful they will be in matriculating to and graduating from college degree programs.

Literature Review Summary

The United State Department of Education, as well as State-level Departments of Education, have progressively been reforming and creating education policies that encourage the implementation of dual credit programs. As a result, dual credit courses are increasingly being adopted in secondary education institutions. These adoptions are helping make waves in overall student academic development and preparation for higher education. In doing so, the inequitable educational opportunities of these programs are gradually becoming smaller. In relation to the positive and/or negative influence of dual credit programs, as it directly impacts high school and college students' social class identity development, research established a suggestion that all states should frame their educational policies on dual credit access to be as transparent and articulated as possible.

To best articulate secondary education and higher education curricula through dual credit programs, all stakeholders should have clear and continuous communication between one another. Although academic standards are enforced in secondary education, they often do not align with college requirements, which is why continuous communication between the partnering institutions is important. Continuous communication will ensure that the dual credit program and students within it are meeting all expectations and are therefore deemed successful. When students enter college underprepared, it is often the policy makers that attribute this to the misalignment between secondary and higher education institutions (An, 2013; Venezia et al.

2007). This adds to the value of dual credit programs being an efficient strategy in connecting the content and curricula of secondary education institutions and higher education institutions.

Secondary education students receive college preparatory level course work, expectations, and rigor, thus providing them with the tools and resources necessary to succeed academically as college students. Research proves that students carry into college the skills, aspirations, and perceptions they developed from their former educational experiences. Studies have discovered that there is a positive correlation between a student's prior academic preparation and their success in earning a college degree (Adelman 2006; Bound et al. 2010; Gamoran & Mare, 1989). Dual credit programs also provide incentive to secondary education teachers to continue their own education, by requiring all dual credit instructors to earn a Master's degree in the specific content area. When college graduation rates increase, it also provides the higher education institution with more opportunity to receive state funding and proper accreditation due to the success-driven data that they are producing.

Based on these results, it can be implied that a strategic plan implementing a vertical articulation strategy of secondary education and post-secondary curriculum, through dual credit programs, is an effective strategy leading to greater overall student, faculty, institutional, and community success. It is vital to the success of all students, that dual credit courses be offered through all public and private higher education institutions, as it allows secondary education students to prepare for the rigor and intensity of academics as a college student. The more prepared an individual is before encountering a more difficult level of course work, the more successful they will be in completing the work. Ultimately, the higher rate of student graduation and degree completion within a higher education institution, the more successful and recognized the higher education institution will become.

Theoretical Framework

This study aimed to discover how different education policy implementation strategies influence student diversity in dual credit programs. One of the key variables influencing the results of this study were the implementation strategies utilized within various dual credit partnerships. Therefore, this research was grounded in policy implementation theory, as it sought to understand how the goals and objectives of certain policies were translated into action. Through grounding the research within this theory, the researcher obtained a more comprehensive understanding of the policy implementation strategies used within Indiana dual credit programs and how they influence student diversity within them.

Policy Implementation Theory

Policy implementation theory was applied to this qualitative study. Policy implementation theory is described as a framework for determining how actionable policy implementation strategies influence the success of the policy goals and objectives. Honig (2006) explained that no single policy gets implemented nor is successful in all places at all times, instead, policies are implemented and successful in some places sometimes (p.2). In the education arena, it is essential to understand not only what is implementable and what works, but rather explore under what conditions these various education policies are implemented and successful. Therefore, the influence of state education policies on the strategies implemented within dual credit partnerships was researched within this study. Sequentially the influence of those strategies on equitable access to dual credit programs were also researched by examining the diversity of students enrolled. Through a policy implementation framework, this study aimed to reveal the policies, people, and places that shape how implementation unfolds and how

interactions among them help to explain implementation outcomes within Indiana dual credit partnerships. Honig (2006) explained that,

the demands specific policies place on implementers; the participants in implementation and their starting beliefs, knowledge, and other orientations toward policy demands; and the places or contexts that help shape what people can and will do allows researchers to determine what is implementable for whom, where, when, and why. (p.2)

Assessing the education policies through this framework was important as it served as a provision to dual credit partners with more specified groundwork to base their strategic decisions. Dual credit partners may make more informed decisions through understanding the conditions under which certain implementation strategies work and not just the details of the independent strategy that was applied. This intends to create more successful implementation of education policies within individual partnerships.

Former research proved that each state uses different language within their state policies and legislation in regard to dual credit programs. In this study, Indiana is the observed primary leader in implementing an equitable approach to dual credit student participation in public education institutions. Applying this framework helped address core gaps between the participation rates of students within Indiana dual credit programs with a narrowed focus on institutional partnership strategies (Ecute, 2019; Felder, 2017; Hoffman et al., 2008). Continued comparison of the language used within the state policies about dual credit programs, addressing most specifically the policies and legislation of dual credit partnerships, was also conducted (Huffman et al., 2019; Kalir & Dillon, 2020). The Indiana state policies were approached in a way that highlighted their respective successes with diverse student enrollment in such programs

as a way to encourage other states to provide similar equitable approaches when initiating their dual credit partnerships.

Chapter Summary

The literature within this research proves that although there are significant equity gaps within programs such as dual credit across the state that negatively impact students of low-socioeconomic status, there are various collaboration strategies that dual credit partners incorporate to ensure a greater influence on program equity and access. Speculation among educators and educational researchers holds that increases in the demands for accessibility of dual credit courses within K-12 school districts may have detrimental effects on the equitable educational opportunities provided to students of various socioeconomic backgrounds (Zinth, 2016). The Indiana state policies and legislation on dual credit programs and utilization of best practices to develop a theory of action were reviewed and analyzed. Then, an equity improvement plan that other states can implement to provide a more equitable educational opportunity for diverse sets of students, that desire to participate in dual credit programs, was developed.

The development of a statewide task force for dual credit programming would also be an exceptional idea, as funding could then be directly allocated to the task force to disperse to areas that need it most. Doing so would allow autonomy of the states while also ensuring that the task force specialists are delivering the funds specifically to those institutions and regions that have less opportunities to thrive due to their underrepresented and low-socioeconomic communities. The increase in online learning is requiring educators to develop teaching skills and competencies beyond their subject matter knowledge, where they may then stumble upon more challenges such as the rapidly changing technologies, pressure to productively employ

technology and incorporating appropriate teaching methods into an increasingly diverse environment (Martins & Ungerer, 2017). Ensuring that states maintain autonomy in fund allocation could serve as extremely beneficial in many avenues. Using funds to properly train educational leaders in methods of online instruction, as well as provide technology resources and assistance as needed to students and educators, could serve as extremely beneficial for dual credit stakeholders.

CHAPTER III: METHODOLOGY

This chapter discusses the research methodology for this qualitative education policy implementation study investigating the relationship between the influence of state education policies on the partnership strategies implemented within dual credit partnerships in Indiana. The data collection process included an electronic survey instrument and virtual semi-structured interviews. The survey and interviews were distributed to 83% of Indiana higher education institutions accredited through the National Alliance of Concurrent Enrollment Partnerships (NACEP) or the Dual Credit Accreditation Program (DCAP). The questions for both the electronic survey and virtual semi-structured interviews are provided within the appendix. This study explored the influence of state education policies on the policy implementation strategies utilized within Indiana dual credit partnerships in exploration of how those policy implementation strategies influence the diversity of students enrolled in the dual credit programs in Indiana. The methodology, participants, procedures, analysis method, ethical considerations, as well as the reliability and validity components of the study are discussed within the research plan detailed in this chapter.

Research Questions

This study investigated how different education policy implementation strategies influence student diversity in dual credit programs in Indiana. The study aimed to answer one central research question linked to state education policy influences on dual credit partnership strategies and how those partnership strategies influence student enrollment in dual credit programs within Indiana. The research questions for this study are listed as follows:

Central Research Question

RQ1: How do different education policy implementation strategies influence student diversity in dual credit programs in Indiana?

Research Design

A qualitative research design was appropriate as this study did not aim to provide conclusive answers, but rather aimed to use its findings to form the basis of more conclusive research. The education policy implementation component of this qualitative research was necessary to illuminate the policies, people, and places that shape how implementation unfolds and how interactions among them help to explain implementation outcomes within Indiana dual credit partnerships (Honig, 2006). Participants were selected based on the inclusion and exclusion criteria set for the study. As outlined in Setia (2016), researchers record the information that is present in a population without manipulating variables. Considering the observational and analytical nature of the qualitative research design, the researcher recorded such observations to investigate the association between the variables.

A qualitative case study method with an education policy implementation research design was used for this study. This method was utilized to describe narrowed characteristics that exist in Indiana dual credit partnerships to investigate and make inferences about the association and relationships between dual credit policy implementation strategies, state policies, and student diversity in dual credit programs. The data collected in this study provides preliminary data to support further research and implementation of dual credit education policies.

Research Participants

Purposeful sampling was utilized for the data collection process of this study. Purposeful sampling is a technique that identifies and selects information-rich cases for the most effective

use of limited resources (Patton, 2002). Purposeful sampling was also utilized due to participant availability and willingness to participate, along with their ability to communicate experiences in an articulate and reflective manner (Bernard, 2018). Purposeful sampling was valuable to this study, as the participants sought consisted of a small group of select individuals which allowed maximum information to be obtained. The qualitative interviews were coded to determine common themes within the data. This allowed the researcher to categorize and organize the incoming information into relatable codes; which prepared for a more efficient analysis process. Participants were also assigned pseudonyms to ensure participant anonymity.

The primary research participants included dual credit administrators from 83% of Indiana higher education institutions that are accredited by the National Alliance of Concurrent Enrollment Partnerships (NACEP) or the Dual Credit Accreditation Program (DCAP). Research participants sought for data collection participation included the recognized lead dual credit administrator from NACEP and DCAP accredited Indiana higher education institutions. As the higher education dual credit administrator serves as the lead reference for institutional dual credit partnerships, those were the professionals pursued for connection and participation during the first stage of the study's data collection process. If a higher education dual credit administrator was unable to be identified or contacted, the researcher sought a similar dual credit liaison and/or advisor from that respective higher education institution. If participation was denied by the institution's lead dual credit administrator or similar role, the institution was removed from participating in the study.

Instruments

The primary participants were first asked to respond to a brief pre-interview survey that requested information about the institution's dual credit student body, funding opportunities, and

tuition payment expectations, followed by a semi-structured interview. The researcher anticipated a total of nine institutional representative participants, as determined by the participant characteristics outlined earlier in this chapter. However, only 5 participants were available to partake in the study, which is why 83% of the NACEP and/or DCAP higher education institutions were utilized and not 100%.

Pre-Interview Survey

The purpose of the survey was to collect population-based data. The researcher efficiently obtained information describing characteristics of a sample of individuals of interest (Ponto, 2015). This type of data collection was necessary provided the scope of a doctoral capstone project in addition to the project seeking participants from NACEP and DCAP accredited higher education dual credit partnering institutions across the state of Indiana. Johnsen and Christensen (2017) explained that survey instruments contain questions and statements that adhere to the researcher's research content. However, its attitudes are usually measured by using rating scales. Participants were expected to respond using one of the allowable response categories given (Johnsen & Christensen, 2017). The pre-interview survey included required responses to multiple choice, select all that apply, fill in the blank, and upload a file style questions. Participants received the survey link via email upon their consent to participate in the study. The survey was developed on a Google Form platform, which automatically collected the data from each participant upon the completion and submission of their responses.

The purpose of the survey being unmasked was to ensure the researcher could follow-up on the responses within the scheduled semi-structured interviews to illuminate the data from the survey. Confirmation occurred through written documentation that the information provided would remain confidential and non-identifying in the data results section of the completed

written study. The survey instrument responses were recorded and stored in the researcher's personal and password protected laptop device.

Data Collection Procedures

Institutional Review Board approval was sought from Governors State University. Upon granted approval, the researcher emailed the list of prospective participants, using the Email to Potential Participants (see Appendix C). The initial email sent to potential participants included a brief purpose of the study, a brief explanation for why they were being recruited, and a request for participation. The pre-interview survey was linked within the body of a follow-up email upon receipt of the signed consent form and official IRB approval. Upon completion of the pre-interview survey, the researcher verbally sought permission to follow-up with the participant during the scheduled semi-structured interview in case further explanation of responses was required.

Primary participants were recruited through the 2019-2020 Preferred Provider List for High School Delivery published by the Indiana Department of Education (Indiana Commission for Higher Education, 2020). This document provided the publicly reported dual credit administrator contact information for each of the NACEP and DCAP accredited Indiana higher education institutions. The researcher initially emailed each potential participant using the Email to Potential Participants in Appendix C. The researcher also contacted the potential participants via phone to request their participation in the study in a more personable manner using the phone script in Appendix C, if electronic contact was not made within one week of the initial email.

The pre-interview survey was completed electronically and took participants approximately fifteen to twenty minutes to complete. The survey was active for three weeks from the date issued. Reminder emails were sent one week after the original survey request, and again two

days before the survey was scheduled to close, to all participants who did not complete the survey as documented in Appendix D. Data analysis began as soon as data was received. If a survey was incomplete, the researcher contacted the participant to request a resubmission of a completed survey. If the survey remained incomplete, only the data from the completed sections were used and the incomplete sections were distinguished as such within the results section of the study. An informed consent form, as shown in Appendix C, was required prior to participation. If participants agreed to the interview portion of the study, the researcher worked with the participant to schedule a virtual interview session via Zoom. The virtual interview took approximately 45 minutes to complete. All interviews were recorded and transcribed via Zoom. Participants were not a part of the writing, editing, analysis, or results section of the study, as no participant had access to other aspects of the research. All data was saved and stored in the researcher's personal and password protected laptop device.

Data Analysis

Analysis of the research included the coding of close-ended question responses within the Google Form survey to be categorized in a quantifiable manner. As respondents were only able to choose from pre-selected options, this segment of the data analysis was final in nature and thus easily cross-tabulated. Cross-tabulation of data is the inputting of results into a data table to better examine relationships that may not be readily apparent when analyzing total Google Form survey responses (Jenkins-Smith et al., 2020). Zoom interview responses were also coded for open-ended interview questions within an excel spreadsheet. The researcher began the coding process by identifying the most commonly used words, phrases, and themes within participant responses. Then, the researcher established a specific code for the most commonly used words identified within the responses with alphabetical sorting. The researcher was then able to record

each individual response within the matching categories. Following this, the researcher developed a relative frequency table based on the coded responses. Once the relative frequency table was made, the information was visually represented in various graphs, charts, and tables. A peer checker was also utilized once all Google Form survey and Zoom interview responses were coded, cross-tabulated, and alphabetically sorted (Given, 2008). The use of a peer checker ensured clarity and accuracy of the codes. One peer checker utilized for this study included a project manager that has mastered skills in excel documentation, charting, coding, data analysis, and additional quantitative research skills that contributed to their review of the study. Another peer checker utilized for this study included a high school teacher who also serves as a dual credit instructor and adjunct professor at various higher education institutions. This peer checker was able to contribute their knowledge of the content in their review.

Reliability and Validity Concerns

Reliability and validity of the research was determined through member checking. Once the survey responses and interview responses were collected and transcribed, the researcher sent a follow-up email to the participants with the meeting notes, response interpretations, and synthesis of the data for review. Allowing the participant to review the researcher's interpretation of their responses confirmed that the information was stated and interpreted correctly and accurately within the study (Birt et al, 2016). Member checking was an essential component of the study to ensure that the researcher accurately recorded and synthesized the data from both the participant's survey responses and interview responses.

To reduce the amount of errors in conducting survey research for this independent study, researched data collection strategies were implemented. The researcher utilized several strategies to reduce data collection errors (Table 1).

Table 1

Data Collection Errors

<i>Error</i>	<i>Error Reduction Strategy</i>
<i>Coverage Error: Unknown of zero chance of individuals in the population being included in the sample.</i>	Multimodal design ensured that the participating higher education institutions were from the IDOE issued Preferred Provider List and were accounted for in the state of Indiana.
<i>Sampling Error: Individuals included in the sample do not represent the characteristics of the population.</i>	The population of higher education institutions were clearly identified as dual credit program partnering higher education institutions; diverse participant recruitment strategies were implemented via multimodal platforms; sampling took place across the state of Indiana.
<i>Measurement Error: Questions and/or instruments do not accurately reflect the topic of interest; surveys/interviews do not evoke truthful answers.</i>	Valid and reliable instruments were utilized; graphics and visual characteristics of instruments were user-friendly.
<i>Nonresponse Error: Lack of response from all individuals in sample.</i>	The survey was designed in a user-friendly manner; researcher implemented follow-up procedures for non-responders.

Note: Dillman and colleagues (2014), Singleton and Straits (2009), Check and Schutt (2012).

Delimitations and Limitations

As indicated in chapter one, there were delimitations associated with this study. First, the researcher sought to understand the demographics and partnership strategies utilized within dual credit partnerships. This study only examined the lead dual credit administrator at the Indiana higher education institution involved in the dual credit partnership, not the secondary education institution involved. Similarly, the sample only included 83% of Indiana higher education institutions accredited through the National Alliance of Concurrent Enrollment Partnerships (NACEP) and the Dual Credit Accreditation Program (DCAP). That being said, a total of five dual credit administrators from the state of Indiana were utilized as participants in the study. There may be other higher education institutions that partner with secondary education institutions for dual credit programming, however, they were not included in this study because

they were not recognized as accredited through the NACEP or DCAP at the time the study took place. Additionally, this study only examined dual credit administrators from the partnering higher education institution.

A limitation of this study was that the data being collected only represents select higher education institutions within the state of Indiana. The information collected from these higher education institutions may not present data that can be transferrable to other states, although it is an aim of the study to provide recommendations that are transferrable across states. Another limitation was related to the content of the dual credit programs and opportunities. Participants may offer many dual credit courses, but the specific content or transferability of the courses provided may not be of interest to some groups of secondary education students seeking college credits from dual credit coursework. The type of courses provided may potentially lead to smaller percentages of dual credit enrolled students from low-socioeconomic districts being reported within independent higher education institutions compared to other institutions. However, the characteristics of the type of dual credit courses offered by each accredited higher education institution were not accounted for in this study.

Ethical Considerations

Some potential ethical issues with using online surveys in educational research and strategies to reduce those ethical issues may include: dual teacher and researcher role; informed consent; use of incentives; privacy, anonymity, and confidentiality; and data quality. The dual teacher and researcher role was a potential ethical consideration because the primary researcher that conducted the educational research via an online survey and follow-up interview was also a dual credit teacher for one of the educational institutions that participated in the survey. The researcher was also a Board Member for the same higher education institution's Concurrent

Enrollment Board. The strategy utilized to avoid ethical conflict was seeking advanced permissions prior to sending out the initial survey. Informed consent was another ethical consideration, where the researcher had to seek prior consent from all participants. All participants were over the age of 18, so consent of minors was not required. To confirm consent of survey and participants, an official document was provided for electronic consent/signature prior to participating in the survey.

CHAPTER IV: RESULTS

Findings

The purpose of this study was to research the influence of state education policies on dual credit partnerships, an essential component to understanding the strategies successful in shaping education policies that encourage more student diversity (race, ethnicity, socioeconomic status) in dual credit programs. The study also aimed to address the rationale behind each participating institution's policy implementation strategies and the state policies that influenced those decisions. Through this research, knowledge was obtained as to how education institutions choose to revise or update institutional procedures to encourage more student diversity in dual credit programs. The research questions addressed include:

Central Research Question

RQ1: How do different education policy implementation strategies influence student diversity in dual credit programs in Indiana?

This chapter discusses the data and results received from participants through a Pre-Interview Survey and a virtual semi-structured interview. The survey and semi-structured interview asked questions that allowed the primary researcher to further explore the relationship between the influence of state education policies on the partnership strategies implemented within dual credit partnerships in Indiana. The researcher utilized the data gathered to further investigate how those policy implementation strategies influence the diversity of students enrolled in the dual credit programs in Indiana. The survey was distributed to all participants electronically through the Google Form platform, which automatically collected and consolidated participant responses for the primary researcher. The virtual semi-structured interview was conducted, recorded, and transcribed through the virtual platform, Zoom. The Zoom Interview was scheduled and setup

between the primary researcher and the individual participant. The breakdown of individual questions and participant responses are discussed in more detail throughout the following chapter.

Review of Study

The Pre-Interview Survey sought responses to questions that addressed local procedures within dual credit programs in addition to dual credit student body demographics. Participants were asked to provide responses through various mechanisms such as: multiple choice, select all that apply, short answer, and document upload options. The primary researcher asked each participant to provide descriptive details about the student body population within their institution's dual credit program. Participants provided these responses through written descriptions, excel spreadsheets, and/or sharing data recorded in charts or graphs. Each multiple choice and select all that apply questions provided an additional option of "other," where participants were able to record a unique response if the other options did not suit their specific dual credit program procedures.

Each semi-structured interview took place approximately three to four days after each individual participant responded to the Pre-Interview Survey. This time span allowed the primary researcher adequate time to review the survey responses prior to meeting with each participant for the scheduled interview. The survey data was momentarily discussed within each individual interview to ensure complete and accurate comprehension of the data recorded, in addition to affording another opportunity for the participant to elaborate on any of the survey information they provided. The semi-structured interview was designed for the participant to do majority of the talking, with the primary researcher serving as note taker and interview facilitator. As interview facilitator, the primary researcher occasionally asked the participant probing questions

or to further elaborate on aspects mentioned to ensure a complete and accurate comprehension of the presented information.

Participants in this research included higher education professionals that were recognized as their institution’s main dual credit administrator.

Participant and Representative Institution Demographics

Table 2

Participant and Institutional Demographic Breakdown

	<i>Role</i>	<i>Region</i>	<i>Number of Institutions Representing</i>
<i>Andrew</i>	Director	Urban	1
<i>Becky</i>	Assistant Director	Rural	1
<i>Chloe</i>	Assistant Director	Suburban	1
<i>David</i>	Executive Director	Urban Suburban	2
<i>Erin</i>	Director	Urban - 3 Suburban – 1 Rural - 1	5

The primary role of a higher education dual credit administrator is to lead the continuous development and improvement of the institution’s dual credit programs, which may consist of various responsibilities from institution to institution. This position may also have a different title at various higher education institutions, such as: K-12 and Higher Education Coordinator; Director of Concurrent Enrollment Programming; Executive Director of Dual Credit Advisement; etc. Each dual credit administrator’s higher education institution must be accredited

through the National Alliance of Concurrent Enrollment Programming (NACEP) or the Dual Credit Accreditation Program (DCAP) to qualify for participation in this research.

Dual credit administrators who consented to participate in the interview were asked to take the pre-interview survey. Dual credit administrators were given seven calendar days in the late part of February 2021 to complete the pre-interview survey with an email reminder sent two days prior to the closure of the survey window. The purpose of the pre-interview survey was to obtain preliminary and demographic information about each institution's dual credit program and dual credit student body, that was not directly available on a public online platform. Another purpose of the pre-interview survey was to prepare participants for the types and depth of questions that will be asked of them to respond to in regard to their institution's dual credit program.

Online Pre-Interview Survey Results

The following tables and figures summarize the data collected from the online Pre-Interview Survey results completed by all research participants. The preliminary information requested from each participant is presented first, to establish the broader and more generic information that was not readily available on other publicly displayed datasets. The preliminary information presented laid the groundwork for supplemental questions that the primary researcher asked during the interviews. Table 3 showcases the percentage of responses by research participants as to whether or not their institution had policies or procedures in place that specifically addressed the parties responsible for paying the dual credit tuition in full and on time for the academic year of 2019-2020. In Table 3, HEI is used as the acronym for Higher Education Institution. This data was essential, as it outlined the basic components of whether or not the higher education institutions being represented through the study's participants had specific policies or procedures in place addressing dual credit tuition payment responsibilities.

Dual Credit Tuition Payment Policies and Procedures

Table 3

Policies and Procedures for HEI Dual Credit Tuition Payment

<i>Response</i>	<i>Frequency</i>	<i>Relative Frequency</i>
<i>Yes</i>	4	0.8000
<i>No</i>	1	0.2000
<i>Other</i>	0	0.0000

As noted in Table 3, research participants had three options to choose from when responding to the specific question: Yes; No; or Other. Based on participant responses, it has been recorded that, 80% of the participants stated that their higher education institution did have a policy or procedure in place specifically addressing dual credit course tuition payment expectations for the academic year of 2019-2020. Only 20% of the participants stated that their institution did not have a policy or procedure in place addressing dual credit course tuition payment expectations for the academic year of 2019-2020, with 0% of participants selecting the third response option: “other.”

This data was important to address within the study, as it provided the primary researcher with confirmation on whether or not the higher education institution had policies or procedures in place that addressed dual credit course tuition payment expectations. Determining if each institution documented these policies and procedures within their dual credit program provided the researcher with evidence that most Indiana higher education institutions are aware that tuition payment is an important aspect of dual credit programming. This also allowed the researcher to address the participants during the interview with follow up questions asking about the specific policy or procedure that is in place.

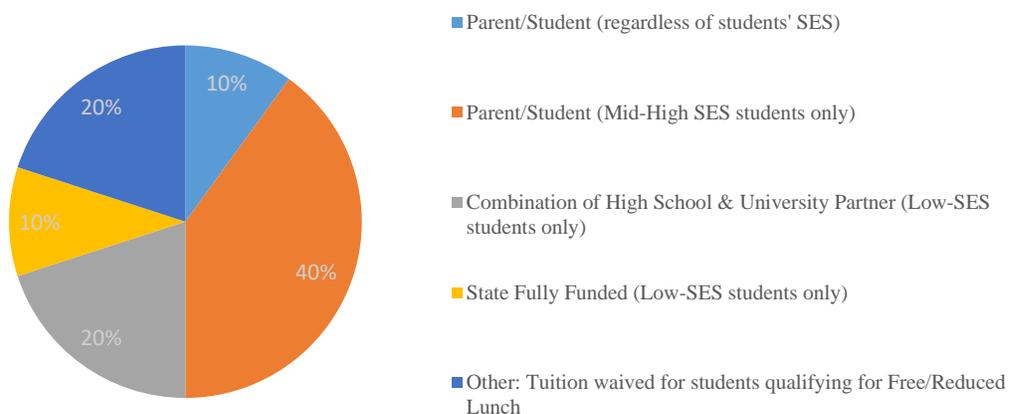
Dual Credit Tuition Payment Responsibility Placement Expectations

Figure 1 contains the data representative of the expectations that each higher education institution had in regard to the placement of tuition payment responsibility for dual credit programs during the academic year of 2019-2020. This data was noteworthy, as it further detailed the various responsibility placement for dual credit tuition across Indiana higher education institutions, as well as within each individual higher education institution.

Figure 1

Expectations for HEI Dual Credit Tuition Payment Responsibility Placement

Dual Credit Tuition Payment Responsibility Placement



As displayed in Figure 1, there are many options that higher education institutions can select when determining which party or parties they hold responsible for ensuring tuition payment is submitted for students enrolled in the dual credit program. Results detailed that 80% of participants stated that their institutions held the parent or student of middle to upper socioeconomic status responsible for paying the dual credit course tuition for the 2019-2020 school year. Out of all participants, only 40% stated that they held a combination of the high school and higher education institution, regardless of students' socioeconomic status, responsible for making the tuition payment on dual credit courses. In other words, the education institution

partners may agree to lower or waive tuition fees for certain groups of students based on their own terms.

Another 40% of participants stated that students qualifying for free/reduced lunch, in the state of Indiana, must have their tuition waived completely – pulling no monetary supply from any stakeholder. As this is a state mandated policy, all public higher education institutions must provide this tuition waiver for dual credit students that qualify for the free/reduced lunch program. Finally, 20% of participants said their institution held the parent or student responsible for paying tuition, regardless of socioeconomic status, with another 20% of participants stating that the state fully funded the tuition payments for dual credit courses for students of low socioeconomic status. The participants that responded with the parent or dual credit student being held responsible for tuition payment stated that they do have payment plan options that can be followed to help alleviate the financial impact of a large one-time expense.

This information is essential to understanding the complexities of dual credit tuition payment processes at the higher education institution level. As detailed in the survey data, it is also important to note that many of the higher education institutions may still hold all students and families responsible for making the tuition payment, however, in the state of Indiana, students qualifying for the free/reduced lunch program have their tuition completely waived. This is an additional valuable piece of information within the research because it is proving that due to state mandates, higher education institutions are expected to waive the tuition fees for certain groups of students. This ultimately confirms the influence that state policies have on the implementation strategies, procedures, and program processes within dual credit programs.

Low-SES Dual Credit Student Financial Support

The data in Figure 2 exemplifies the different forms of financial support services that each higher education institution provided for the students enrolled in their dual credit programs for the academic year of 2019-2020. In Figure 2, low-SES serves as the acronym for low-socioeconomic. This information was valuable as it provided further insight into what other financial supports higher education institutions in Indiana are providing dual credit students.

Figure 2

Financial Support Services Provided to low-SES Dual Credit Students

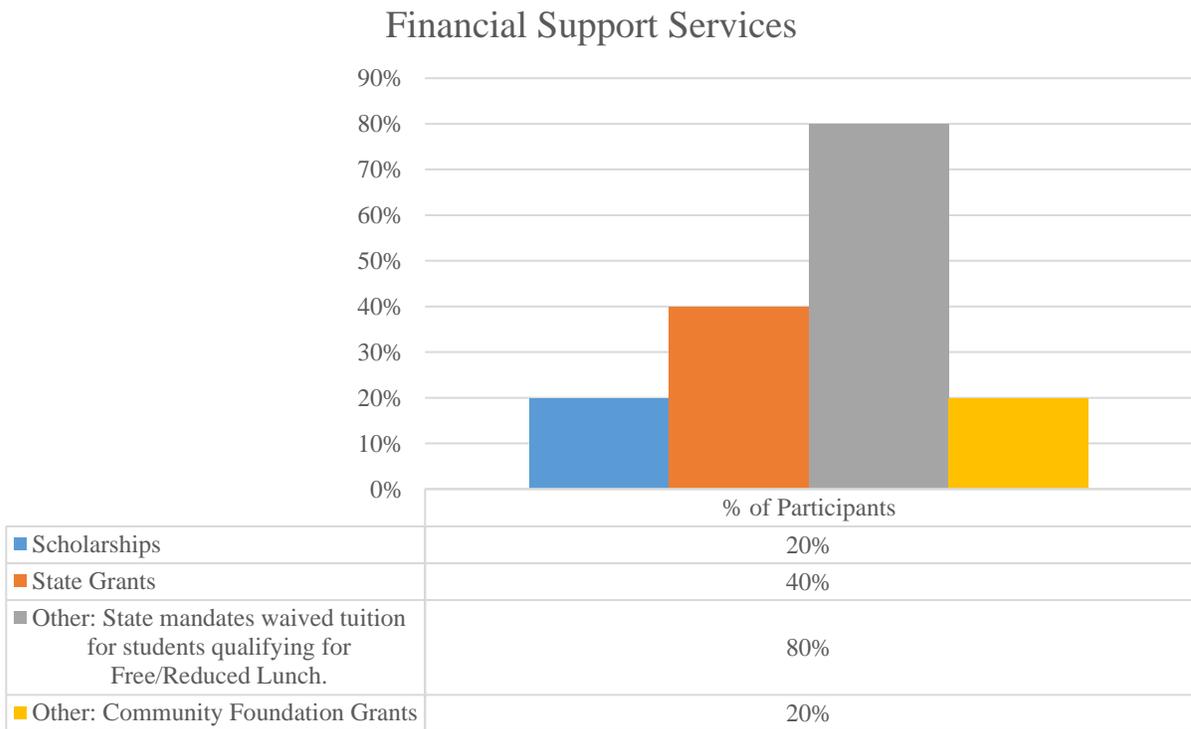


Figure 2 shows the most common financial services that higher education institutions offered students enrolled in their dual credit programs for the academic year of 2019-2020. However, as noted within the data, sometimes there are multiple opportunities offered to support students with their education finances. As represented in the data collected, 20% of participants stated that their institution supported students entering dual credit programs in the form of

scholarships, while another 20% said students were financially supported through community foundation grants. Only 40% of participants stated that their higher education institution financially supported students through the utilization of state grants. However, the 80% majority of participants stated that their institution closely followed state mandates that called for all tuition fees to be waived for students qualifying for free/reduced lunch.

This is a significantly valuable piece of information for the study, as it details the various types of funding strategies and methods that Indiana higher education institutions implement to support students more financially in their pursuit to enrolling in dual credit courses. The fact that higher education institutions are providing additional means for students to receive financial assistance when enrolling in dual credit programs, proves that awareness to student financial barriers is key to providing access to more diverse sets of students. When institutions are aware that students enrolling into dual credit programs may be deferred for financial reasons, they are able to develop other supports to encourage higher percentages of students from various backgrounds to follow through in their dual credit enrollment process. This information is also essential, as it shows that there are many other students who are in need of financial assistance besides those students who qualify for the free/reduced lunch programs.

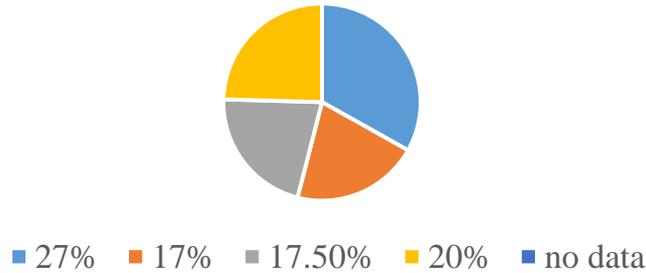
Low-SES Dual Credit Student Percentages

Figure 3 represents the percentage of low-SES students enrolled in each higher education institution's dual credit program for the academic year of 2019-2020. This information was notable, as it provided the primary researcher the opportunity to observe potential discrepancies and/or gaps between students from different socioeconomic backgrounds and their enrollment within a dual credit program.

Figure 3

Percentage of Low-SES Students Enrolled in Dual Credit Program

% of Low-SES Students Enrolled in Dual Credit Programs
for the Academic Year of 2019-2020



The data displayed in Figure 3 shows that out of all dual credit enrolled students, it is evident that there is a significantly lower percentage of low-socioeconomic students that enrolled in dual credit courses, regardless of institution, for the academic year of 2019-2020. The data results present that the highest percentage of low-socioeconomic students recorded by participants was presumably 27% with the lowest percentage presumably being 17%. The presumptions made from the data stem from one participant noting that their institution does not collect data on student socioeconomic status within their institution's dual credit programs.

The data collected here was important to the study to determine which institutions were receiving higher percentages of low-socioeconomic students versus institutions that were not seeing as high of numbers. This data was reflected upon to address whether or not the tuition payment responsibility placement policy or the additional financial support services were truly influential in encouraging a larger and more diverse student body within the dual credit program at each individual institution. These percentages did show a trend that the institutions that provided specific tuition payment policies, as well as provided additional financial supports, did have a higher percentage of low-socioeconomic students enroll in their dual credit program.

Dual Credit Student Demographics

Table 4 highlights the demographic breakdown of each institution’s dual credit student body. This demographic breakdown consists of the entire dual credit student body for all research participant’s higher education institution for the academic year of 2019-2020. Collecting data on the breakout of the student body was essential to determining the level of representation of diverse sets of students within each institution’s dual credit program.

Table 4

Demographic Breakdown of Dual Credit Enrolled Students

	<i>Andrew</i>	<i>Becky</i>	<i>Chloe</i>	<i>David</i>	<i>Erin</i>
<i>Asian</i>	4.50%		2.15%		4.75%
<i>African American</i>	2.10%		2.24%		6.12%
<i>Hispanic/Latino</i>	7.70%		1.35%	16.70%	6.05%
<i>Native American Indian/Alaskan Native</i>	0.17%		0.18%		0.15%
<i>Pacific Islander</i>	0.10%		0.13%		0.05% %
<i>Two or More Races</i>	3.50%		4.44%		4.29%
<i>White</i>	81.10%		86.77%	67.38%	78.05%
<i>Non-Reported/Not Collected</i>	0.31%	100%	0%		0.59%

All participants’ respective higher education institutions reside in various rural, urban, and suburban areas of Indiana. Therefore, the primary researcher expected a variety of demographic percentages to be recorded within each participant’s response. This variance of demographic information holds significant value though, as it allowed for a more comprehensive understanding of the demographic outlook of students enrolling in dual credit programs throughout the state. The data collected highlights White students as the dominant ethnicity within the dual credit program student body across the state of Indiana, with an approximate 80%-90% presence. Hispanic and Latino ethnic-identifying students as the second largest

presence, but makeup approximately 70% less of the dual credit student body than their White peers. One of the participants noted that their institution did not collect dual credit student demographic data, thus were represented under the ‘non-reported/not collected’ option.

This data was essential to the study, as it provided a breakdown of each individual institution’s student body identities. This information was particularly useful in proving that the representation of diverse sets of students within dual credit programs in Indiana is still at a stark low in comparison to the culturally dominant White majority. This information contributed to the discussion of whether or not Indiana education policies are truly supporting and positively influencing student diversity within dual credit programs as much as they claim.

Longitudinal Data Availability

Participants were asked if their institution had longitudinal data available for their dual credit program. The primary researcher planned to incorporate data trends in state policy influence and student diversity within dual credit programs for each higher education institution that had longitudinal data available to share. This information was collected with the intention of further investigating any trends in student diversity enrollment within each institution’s dual credit program. However, upon receiving the results, the data was used more to confirm how recently institutions have begun to collect student data within their dual credit programs.

Table 5

Availability of Longitudinal Data of HEI Dual Credit Program

<i>Response</i>	<i>Frequency</i>	<i>Relative Frequency</i>
<i>Yes</i>	2	0.4000
<i>No</i>	3	0.6000

As noted within Table 5, less than half of the participating higher education institution dual credit administrators had access to longitudinal data of their dual credit programs and/or had

any longitudinal data for their dual credit program at all. Thus, considering not all participants had longitudinal data to share, the longitudinal data recorded served primarily as an addition to and as supplemental to the responses provided for each of the other Pre-Interview Survey question responses. The information collected here also provided evidence that higher education institutions are just now starting to collect student data to track in a more longitudinal sense. This emphasizes the lack of information in regard to student diversity trends or changes over the past five years.

Summary of Online Pre-Interview Survey

The survey data presents the lack of diversity in race and ethnicity amongst students enrolled in dual credit programs across the state of Indiana, where White is recognized as the ethnic identifier of over 80% of dual credit earning students. Results from the survey also highlight that more than half of the participating higher education institutions did not have longitudinal data available about students enrolled in dual credit programs prior to the academic year of 2019. Participants from higher education institutions that did have longitudinal data available indicated that dual credit student demographic data (i.e. socioeconomic status, race, ethnicity, and gender) only began getting collected a year or two prior to 2019. The implications of this notion are addressed in more detail within some of the participant interviews.

Semi-Structured Zoom Interview Results

The semi-structured Zoom Interview consisted of questions addressing each higher education institution's:

- High school student data collection processes and procedures
- State education policies most often referred to when making decisions about dual credit program development
- How state education policy information is obtained
- Which state education policies most influence local procedures within a dual credit program
- Development of institutional procedures for a dual credit program
- In-depth explanations on the institutional procedures and policies implemented within the institution's dual credit program

College Credit Earning High School Student Data

Table 6 highlights the breakdown of the data that each higher education institution collects about college credit earning high school students, followed by the processes in which the institution collects said data, and how each institution uses said data. This data is representative of each individual research participant's respective higher education institution data collection procedures for college credit earning high school students. This data provided a relevant and thorough breakdown for further analysis and investigation of what specific information higher education institutions are collecting about the students registering and enrolling in their dual credit programs.

Table 6

College Credit Earning High School Student Data Information Collected

<i>Response</i>	<i>Frequency</i>	<i>Relative Frequency</i>
<i>Race/Ethnicity</i>	4	0.3333
<i>SES</i>	3	0.2500
<i>GPA</i>	3	0.2500
<i>Lunch Status</i>	4	0.3333
<i>Contact Info</i>	4	0.3333
<i>Parent Permission Form</i>	3	0.2500
<i>Transcripts</i>	3	0.2500
<i>Standardized Test Scores</i>	1	0.0833
<i>None of the Above</i>	0	0.0000
<i>Other</i>	1	0.0833

Table 6 displays the data collected from each participant about the student information that is collected by their dual credit department. Explanation of the data collection processes provided by the participant was unique to every institution. For example, Andrew noted that they typically do not receive much information about the incoming dual credit student at all and that the only information they are primarily concerned with is the lunch status of said incoming dual credit students and the students' transcripts. The lunch status was a popular concern amongst all participants, as students who qualify for Indiana's Free/Reduced Lunch Program are mandated to receive a complete dual credit tuition payment waiver. In other words, there are no funds received or provided by any dual credit or institutional stakeholder. The lunch status, as explained by Andrew is given to the higher education institution by each partnering high school. The higher education institution does not cross check this information and instead relies solely on the integrity of the high school partner to provide updated and accurate lunch status information about each dual credit student. Transcripts, Andrew explained, are used primarily to check if students completed the prerequisite requirements for the dual credit course they are enrolling in.

Becky elaborated on the student data that their institution collects by stating that most of the data is utilized for institutional contact purposes such as tuition payment reminders and recruitment materials. This is expected to encourage their dual credit students to matriculate into one of their institution's degree program upon the student's high school graduation. Becky explained that, "[the student data] is collected and stored in our admissions CRM software...we'll use it to send out some emails for students who might be interested in applying to our university." Essentially, the information collected is provided by the student when they submit their dual credit application, which is then sourced through the institution's online software program. The online software program collects, organizes, and stores the requested information from the student application to be used in various matters. Some instances include event notifications, tuition payment reminders, and recruitment materials often sent through the admissions department. When a student submits an application that is missing certain materials and/or a certain course the student is registering for requests additional information, Becky's dual credit department requests the missing student information from the partnering high school's guidance counselors.

Chloe explained that the information their dual credit department collects about incoming dual credit students is provided upon the student's online application completion. Chloe's institution also collects a paper form that details information such as student contact preferences, address changes, photo release, and parent permission signature to enroll the student into their dual credit course(s). Sometimes, Chloe clarified, student standardized test scores are collected if the student is trying to enroll in a dual credit course that has a unique set of course prerequisites. Standardizes test scores, however, are not collected for every enrolling student nor are they collected on a frequent basis. Student information such as demographics, lunch status, and GPA

are collected and stored in a locked Google Sheet that is only accessible to certain individuals at the higher education institution and the partnering high school.

A unique response that only Chloe mentioned was the request of student information regarding IEP or 504 status of students. Chloe explained that although this is rarely an occurrence with dual credit students:

Sometimes a school alerts us that a student has an IEP or a 504 and they otherwise qualify to be in the [dual credit] course...we will then collect [that student's] list of accommodations, so that we can review them with our disability resources office and determine if all of these accommodations would be allowed on campus.

For example, a student's IEP or 504 may request unlimited test time, but the dual credit instructor must follow the IEP or 504 guidelines as approved by the higher education institution and not the K-12 institution. In other words, depending on the higher education institution, a traditional college student would not be allowed unlimited time on a test, instead they are allowed time and a half, this could potentially have an impact on a dual credit student who has unlimited time documented on their IEP or 504. Chloe stated that this IEP or 504 plan would be collected and reviewed by the higher education institution's disability resource office. The disability resource office would then determine what accommodations on that student's IEP or 504 plan would be allowed and/or accommodated for on campus. This is a significant and important aspect of data collection for dual credit coordinators because not all K-12 accommodations completely match higher education accommodations.

Chloe also revealed that their institution may receive student transcripts and/or test scores from the College Board sent as an email to the institution. The dual credit department then downloads the transcripts and/or test scores, removes those students whose information is not

needed, and stores the rest in a locked Google Sheet. In the end, Chloe additionally claimed that although these are the primary processes in which their institution's dual credit department collects student data, the dual credit department almost always requests that the partnering high schools send the student data in the way that is best aligned to their individual institution's available resources or tools. Chloe stated that, "we tell our partner schools, when we need to collect this information, to tell us what is easiest for you, because not every school has an easy student software system, so we will take it however they are allowed to give it to us." In other words, not all of the partnering high schools have access to certain software or online tools, which makes those online modalities virtually impossible for some high schools to complete. Thus, some individual high schools will send the student data in a way that is best tailored to the resources and tools they have available.

David collects student data through two primary steps. The first step is completed by individual students when they submit their demographic information (i.e. gender, race/ethnicity, lunch status), scores, and transcripts through an online self-reporting and application process. The data collected through this first step is most often collected and stored through the same online management system utilized for undergraduate and graduate admissions. The second step is completed during designated points in the academic year when their institution requests key assessment data from the high school partners. This key assessment data is collected through an online learning management system entered by each dual credit classroom teacher that is later pulled by David's institution and analyzed for any anomalies. For example, David describes:

At identified or designated points in the academic year, we collect the key assessment data from our high school partner that has to be submitted through our learning management system. That data is entered by the classroom teacher and then we pull that

data and analyze it for any kind of anomalies. We are really trying to be hyper sensitive to the DFW (Drop, Fail, Withdrawal) rates and how those are occurring and really checking in with our high school partners. If a student isn't performing well at midterm we start having the conversation that we need to withdraw them or have them withdraw, so that it doesn't follow them onto their transcript. We can't undo a transcript.

Essentially, the main component the dual credit department assesses is individual students' midterm grade to determine if conversations need to occur about a student getting withdrawn from the college-credit earning portion of the course if they are failing or performing below standards.

Another way that David's institution utilized the key assessment data is to assess and analyze how well the dual credit students are performing in the courses compared to students taking the same courses as college students on the university campus. The key assessment and student performance data is pulled on a course-by-course basis with dual credit being compared to the equivalent on-campus course. David describes the process:

Our primary agenda is looking at performance of students in our courses to see if they are performing similarly or dissimilarly to our native students on campus. So we compare our native students, as we like to call them, to see if they are performing at or about as well as our dual credit students. We do pair matching in courses to do these native versus dual credit student comparisons. If they're performing lower than, we try to figure out why. If they're performing better than, we also try to figure out and unpack why that is. It sometimes leads to talks of additional training or professional development with our teachers. We also use it as data for program improvement.

The dual credit department at David's institution will explore why dual credit students may be performing higher or lower than students in the equivalent course on campus, as there are many factors that may be contributing to these dissimilarities. This, David explained, is an attempt by their institution to recognize disparities and other issues to further improve the dual credit program.

In alignment with the other participants, Erin agreed that the free/reduced lunch status of enrolling dual credit students is one of the first and primary pieces of information collected from the high school partners. Along with a student's free/reduced lunch status, Erin's institution also collects personal contact information, GPA status, and the race/ethnicity for all prospective dual credit students. This information, Erin explained, has recently started to get collected and stored to track more longitudinal data for the department in the years to come. Formerly, Erin's institution did not store or track this data in a longitudinal format – it was only temporarily collected and reviewed without storing it for future use.

The process and procedure that Erin's institution utilizes has also changed from previous years. For instance, instead of having email chains between the partnering institutions, Erin's institution has implemented an online designated SharePoint file system. The SharePoint file system is used with the higher education institution administrators and the high school principals, counselors, and/or other formally designated individuals at the high school:

The SharePoint allows and gives us the ability to have the security that we need because, since this is student data, it is considered restricted data. So, we no longer have schools send us this information by email. Instead, we have an assigned folder on SharePoint that we have given our partnering schools an affiliate account used to access the assigned SharePoint folder. Schools will then download the spreadsheet template within the folder

to fill in the required student information. They will then upload the spreadsheet to their SharePoint folder once the information is complete.

All of the information that the institution is collecting is used first and foremost to initiate official student ID numbers for each dual credit student, as students are required to use their student ID number to register for the class they are trying to take. A secondary use of this information has been newly implemented, as Erin stated that the institution hopes utilize this information for longitudinal research and studies.

Overall, the type of information collected by majority of the participants was relatively equivalent to one another, as most sought biographical information, GPA status, and free/reduced lunch status for each incoming dual credit student. Generally, most participants also noted that students are the primary individuals submitting this information through some online format, such as an online admissions form, spreadsheet, or other virtual software implemented by the higher education institution. The information requested, as all participants described, is only available to access by specific individuals such as the higher education administrators, high school principals, and high school guidance counselors through a secure account. The main difference between each institution was what each dual credit department within the higher education institution utilized the data for. For example, some participants only utilized it temporarily, where others have been adding it to databases to use for longitudinal research. The participants mentioned that collecting this data is essential to ensure contact is being made with the student and the student meets the minimum prerequisite requirements.

State Policies and Institutional Procedures

Table 7 highlights the breakdown of state education policies that most influence each higher education institution's development of local procedures. This data is representative of

each individual research participant’s respective higher education institution’s processes for determining which state education policies are most important and influential in how the local procedures for their dual credit program are developed.

Table 7

State Education Policy Influence on Institutional Procedures

<i>Response</i>	<i>Frequency</i>	<i>Relative Frequency</i>
<i>IN Commission for Higher Education</i>	5	0.1064
<i>Graduation Pathways/Next Steps</i>	2	0.0426
<i>Core Transfer Library</i>	4	0.0851
<i>NACEP</i>	5	0.1064
<i>IDOE</i>	4	0.0851
<i>IN Dual Credit FAQs</i>	1	0.0213
<i>Priority Course List & Pricing</i>	2	0.0426
<i>Free/Reduced Lunch Policy</i>	4	0.0851
<i>HEI Ability to Set its Own Program</i>	2	0.0426
<i>Admission Guidelines</i>	4	0.0851
<i>Best Practices Joint Dual Credit & AP</i>	1	0.0213
<i>Equivalent Course - 2 HEI Providers</i>	1	0.0213
<i>Governors Workforce Cabinet</i>	5	0.1064
<i>HLC Teacher Credentials/Requirements</i>	5	0.1064
<i>Other</i>	2	0.0426

The data presented in Table 7 indicates that over 80% of the participating higher education institutions focus on the policies established by their accrediting body agencies with more rigor than they do on the dual credit education policies recognized by the state. The accrediting bodies recognized by participants were the Indiana Commission for Higher Education and NACEP. However, the primary Indiana state education policy each participant regularly refers to is recognizing each dual credit student’s free/reduced lunch status, as their higher education institution must waive the full dual credit tuition fee for those students. One recent change to a policy established by the Indiana Commission for Higher Education were the

Higher Learning Commission (HLC) credentialing requirements for dual credit instructors.

Chloe noted that:

The credentialing updates caused a flurry of activity...we had to educate ourselves, then think about what other departments on campus this touched, then we might need to educate those departments and/or gather their feedback...we also had to look at our marketing materials and our website and make a lot of updates there...we had to come up with a game plan, sometimes with trial and error, to roll out a communication plan with our high school partners who need to know. Sometimes it is not just the high school principal, it is the counselor, it is the instructor, and sometimes it is the student depending on what policy it is.

Other participants agreed during the interviews that this change ultimately caused a ripple effect within many education institutions. Both high schools and universities had to adjust their program instructor policies and cross-check already approved instructors to determine if they were now credentialed according to the updated HLC teacher policies.

Andrew stated that the dual credit department at their institution primarily relies on their high school partners to determine if their dual credit course offerings are ones that align with the Indiana Department of Education (IDOE) graduation requirements for high school students. In other words, Andrew explained that their dual credit department focuses on the policies established by their accrediting bodies, while deferring expertise over state education policy updates to their high school partners, as those policies are reflected more on the K-12 districts than they are at the higher education level. Andrew stated that,

We mainly look at the Indiana Commission for Higher Education (ICHE) and since they are our regional support people for our higher learning commission accreditation, I think

that many times, the state legislators and sometimes even our partner high schools don't understand that that's where our funding comes from. So it's always going to take priority. But secondly, we do look at the IDOE requirements as they come through, but typically for graduation pathways that has the Next Steps and has been creating all kind of interesting questions.

In addition, it was noted that although the state education policies can be viewed as influencing higher education procedures, they do so indirectly within the dual credit department. Andrew also noted that they will occasionally review the Indiana graduation pathways and Next Steps to determine if there are other courses they offer on campus that could be provided as a dual credit opportunity that high schools would be interested in partnering together on.

Becky inferred that their institution takes a similar approach to the institution that Andrew is representing. For instance, Becky's higher education institution ensures that they direct their attention toward the policies and standards that their accrediting bodies enforce, rather than focusing much of their attention on the state education policies. Becky noted that most high schools are quite up-to-date on state education policy updates, so they defer to their high school partners' expertise to determine if their dual credit program needs to be updated to improve their dual credit partnerships. The primary state education policy updates that Becky stated their institution frequents is the Indiana Core Transfer Library and the Indiana Department of Education course catalog:

Indiana Department of Education has required that high schools offer, at least on their course catalog, an opportunity for students to take a computer science course. For us, we look at it as an opportunity to reach out because we happen to have a computer science program, so we can offer our computer science courses dual credit students to take. So,

we have been actively reaching out to high schools saying that the Indiana Department of Education is requiring high schools to have this course and if you don't have this yet, you could consider adding one of ours to your catalog as an option to make sure you're in compliance.

Becky claimed that these updates allow the dual credit department to reflect on their dual credit course offerings to see if they are still in-demand or if they have other courses recognized in the Core Transfer Library offered on campus that would be of high interest to their high school partners as a dual credit course option.

Unlike the institutions represented by Andrew and Becky, Chloe's institution has a more thorough approach when developing and improving their dual credit program procedures. Chloe claimed that for their institution, "as we look at developing new policies, it is probably 50/50 can we do this according to the state and can we do this according to NACEP." For example, in addition to referring to the standards and policies set by their accrediting bodies, Chloe's institution actively refers to the Indiana Department of Education facts and questions webpage. This webpage is used to discover the impact that education policy updates have on both the K-12 districts and the higher education institutions.

This was noted as particularly valuable information about state education policies as it provides a direct insight to what high schools are being expected to align with for graduation requirements and other education opportunities that the higher education institution could potentially assist with. Chloe stated that, "the Indiana Dual Credit FAQ's is our go to document. That's where Indiana has compiled everything we really need to know." Not only does this help Chloe's dual credit department revise their dual credit course offerings lists to better align with high school graduation pathways and Next Steps, but it also distinguishes the courses that are

most valuable to the high schools. Chloe explained that this is particularly of interest to their department as it allows them to be a stronger competitor by offering courses that high school students need to graduate, but that they can also earn college credit for taking. This was recognized as a win-win to both of the institutional partners.

Similar to Andrew and Becky's responses, David stated that their institution primarily refers to the standards and policies set forth by their accrediting bodies, while deferring to the expertise of their high school partners over state education policy updates. However, David did state that their institution does occasionally refer to updates posted on the Indiana Department of Education webpage to ensure that they are in alignment with the main standards and policies being addressed. For instance, David stated that,

Knowing what the standards are and helping the people who are doing the work, which would be the liaisons, the faculty members in the institution in terms of like Department Chairs...helping everybody understand here are the new requirements, this is what we have to do, and how we have to demonstrate it. Then, collecting the data and then using that data to make informed decisions...the Board of Advocacy [at the institution] has been huge in helping us and serving as our touchstone, so we are doing things that are in sync with what is happening in public education or education outside of higher ed.

It was mentioned that the institution primarily keeps a close eye on any dual credit teacher credentialing requirement changes in addition to tuition fees and waivers for particular sets of students grouped by the Indiana Department of Education.

Erin, stated that although their institution does not regularly check-in on the Indiana Department of Education webpage, the department does consistently reflect on the Core Transfer Library and Priority Course List and Pricing updates through the Indiana Department of

Education and the Indiana Commission of Higher Education meetings. One difference with Erin's institution, in comparison with the other participants, is that they regularly refer to policy updates from the Indiana Career Connect and Career and Technical Education Crosswalk policies. Erin explained that:

Indiana Career Connect [ICC] is regulated and mandated by the state. So we have to refer to this to see what we have to do if we need to, for instance, add a course to our catalog and make it available to our partner schools to have a pathway for the ICC. But, we have to see if it makes sense to add the course on several different levels. It has to have instructors that can teach the course with HLC credentialing. We have to see if it will be feasible in an economic sense, so if we're bringing it in, if it's not a course that's on an of the crosswalks or on the Career and Technical Education [CTE], we don't get the funding for it. That would be an out of pocket expense and so we would have to weigh that as well as if we are using our current faculty liaisons or do we have to bring in another faculty liaison, because that accrues more expenses and more planning and more difficulties in that sense. So all of those [factors] have an effect on the kind of courses we introduce. There has to be a demand. But of course, we have to take in the State requirements with our local requirements – fiscal concerns and all.

Erin further explained that one of Indiana's recent educational pushes has been to advocate for more dual credit career and technical education course options. Since this initial push, Erin's department has been immersed in working to align their on-campus courses to an appropriate, yet equitable, dual credit course option for high school implementation.

Overall, 100% of the participants interviewed said that their institution actively seeks information and updates from the Indiana Governors Workforce Cabinet as well as Indiana

Commission for Higher Education’s Director of Transfer Indiana, Tari Lambert. Meetings with dual credit departments and administrators occur a few times a year with both the Indiana Governors Workforce Cabinet and the Indiana Commission for Higher Education. It was mentioned by all participants that these meetings are some of the most holistically informative, as the leaders of these organizations do much of the grunt work to ensure that they are relaying the most relevant and important information to the higher education administrators. In addition to these meetings, over 80% of participants stated they received updates about state education policies through being attached to various newsletter and dual credit organization list serves.

Dual Credit Program Procedures and Student Diversity

Table 8 highlights the breakdown of each higher education institution’s specific dual credit program procedures and the influence of those procedures on the diversity of students enrolled in the institution’s dual credit program. This data is representative of each individual research participant’s respective higher education institution’s dual credit program procedures and their (in)direct influence on student diversity within said dual credit program. This information was an essential component of the research, as it clearly identified the policies that participating institutions recognized as being the most positively and negatively influential for student diversity within dual credit programs.

Table 8

Influence of Dual Credit Program Procedures on Student Diversity

<i>Response</i>	<i>Frequency</i>	<i>Relative Frequency</i>
<i>Free/Reduced Lunch Policy</i>	5	0.5882
<i>HEI Ability to Set its Own Program</i>	2.5	0.2941
<i>Admission Guidelines</i>	1	0.1176

Table 8 represents the state education policies that participants felt encouraged student diversity within dual credit programs. Overall, all participants noted that these state education policies may be influencing student diversity differently within each higher education institution's unique dual credit programs. This, they explained, has to do with the state education policy that allows every higher education institution to setup their dual credit programs as individual entities and implement local procedures that are best suited to their institution. Participants also mentioned that state education policies discussing admission guidelines are also unique setups for each individual higher education institution. However, despite the ability that each higher education institution has in setting up their dual credit programs, participant responses were almost identical when addressing the state education policies that they felt most encouraged or discouraged student diversity within their dual credit programs.

The main state education policy that all participants agreed encouraged student diversity within dual credit programs was the complete tuition waiver for dual credit students who qualify for the free/reduced lunch program. Chloe explained that "the biggest [policy] that went into effect around 2008 is the state policy on waiving dual credit tuition for students who are eligible for free reduced lunch...which is about 17% of the [dual credit] student population." Participants claimed that financial standing was one of the most influential factors when students determined whether or not to enroll in the dual credit program prior to the tuition waiver policy mandate. When the state implemented the free and reduced lunch status tuition waiver, it opened up more of an opportunity for low-socioeconomic students to participate in the dual credit programs, that they otherwise were unable to join due to not being able to afford the cost of tuition. Participants witnessed a significant increase in their dual credit student population numbers once the state of

Indiana issued the tuition waiver mandate for students qualifying for the free/reduced lunch program.

However, in alignment with state education policy, all participants also mentioned that even though this tuition waiver encouraged student diversity within their dual credit programs, they are still at a slight disadvantage being a four-year-institution compared to an Indiana community college. David stated that:

What works against us is that Ivy Tech can do it all for free. Ivy Tech is funded in a different model because that's how community college are, they operate on a totally different model and set up. Over time with [specific K-12 school district partner] it's gone from a couple of courses to one and this year they're done with us and are going all with Ivy Tech.

As David explained, this disadvantage has cost them some of their dual credit partnering schools. In Indiana, Ivy Tech is the only community college and is funded and operational through a different model than four-year-institutions. Through this model, Ivy Tech has the ability to provide dual credit courses for free of charge to all students regardless of lunch status. Majority of participants agreed that it is difficult to compete with a higher education institution that can offer the dual credit courses for free of charge to all students, compared to them only being able to offer free dual credit courses to the students that qualify for free and reduced lunch.

Another state education policy that led to more of an even split of thoughts on its influence on student diversity within dual credit programs was how the state of Indiana allows each higher education institution to develop their dual credit programs unique to their institution. Some participants use this ability as a way to try to counter the competitive tuition waivers and reductions within their respective institution. For example, Becky stated that:

We send the list of free and reduced lunch students to our local Community Foundation, who has a fund that they can actually use to pay for students on this list. It's usually a reduction, but you know if a student is taking a class they can reduce those [class] fees to either \$25 or \$10, so it really makes a difference. But that's private funds. We also pay the instructors for the class \$250 to be used for materials or in many cases have been used to pay tuition for other students in the class. That's not necessarily what the [stipend] was designed for, but it's kind of become an option that instructors have used it for.

In other words, participating institutions are advocates of this policy, as it allows them to be resourceful with other funding sources to counteract the impact of their competing institutions. Although this may seem, at first glance, as a benefit to the institution, it is also viewed as a benefit to low-socioeconomic students, as they too can be beneficiaries of these additional funding sources.

Half of the participants interviewed believed that this policy encouraged student diversity, as it allowed each institution to reflect upon their student body demographics, region, and other program procedures to review, assess, and analyze what is working well and what is not working well when encouraging student diversity. Chloe explains another positive influence that this policy has on their dual credit program procedures:

The other 83% of [dual credit students not qualifying for free reduced lunch] are not billed until later. This is good and bad because it spreads out the payment, but sometimes families forget. They can actually set up a four-month payment plan all on their own, through our student system, so when they get their bill, they have a month to pay. But they can choose to spread that out honestly if they needed more time. They could contact us and [the institution] would set up a longer timeline for them.

By doing this, Chloe's institution is able to address other students who may classify as low-socioeconomic, but do not qualify for free tuition under Indiana's free and reduced lunch status criteria. This method has allowed Chloe's institution to focus on those potential dual credit students that may be falling between the cracks of the system. Erin also described a positive dual credit procedure that is different in approach in comparison to other participants, but is recognizably addressing a similar issue and goal. Erin defined the experience as a new onboard procedure implemented within their institution:

A school with primarily historically marginalized students had a more involved partnership that included campus visits for their students [with the exception of COVID this past year]. I also attended annual meetings with the school's administrators and our program administrators. This helped make more connections in advising and onboarding of their students, not just simply providing them with dual credit courses. We're starting to do more with these kinds of partnerships with our more historically disadvantaged schools and students.

The participants that felt this policy encouraged student diversity stated that this is a beneficial point of flexibility for each institution as they can assess and analyze their program on their own terms. They can determine which local procedures best align with their holistic institutional practices.

The other half of participants disagreed by stating that this policy discourages student diversity because there is no structure across the state that clearly states what procedures are proven effective or are recognized as best practices. Instead, this increased flexibility puts a lot of pressure on institutions to spend time and money researching and implementing best practices on their own budget. Some institutions unfortunately do not have the funding or resources to

allocate to such practices for their dual credit program. Chloe provided an example of this from the perspective of a procedure they have implemented at their institution:

We have a graduate fee waiver program that's supposed to help teachers get the credentials that they need, because most schools, as you know, don't offer incentives. And so we have seen that more affluent institutions can pay more to attract teachers, they can also offer perks like tuition reimbursement or stipends, but there's still schools that can't do anything.

In other words, Chloe's institution is able to provide prospective dual credit teachers with additional incentives to attend their institution to receive their HLC certification requirements. However, Chloe noted that not all institutions have the ability to provide these additional incentives, much like how many disadvantaged or low-socioeconomic school districts cannot afford to reimburse or provide stipends to their dual credit teachers. This may ultimately impact low-socioeconomic students within those school districts as they may have less access to dual credit courses since their school districts have less access to dual credit qualified teachers. David confirms similar concerns with the extensive flexibility that this policy provides by stating:

Sometimes I feel like we're caught between two things because the state is willing to support individuals who are teachers with a Master's degree, but maybe not 18 credit hours. But they haven't always been able or willing to support those who would get the Master's degree if they had a little financial support. We've applied for [specific] grant, great, but that's all we can offer...we want to help the people who are doing the work.

Thus, this essentially discourages student diversity as institutions may choose to forgo these program opportunities because they do not have an affordable means to do so. This would

ultimately hinder the benefit that dual credit programs could potentially bring to various disadvantaged student groups and school districts.

In alignment with these apprehensions, 80% of participants believed that state education policy allowing higher education institutions to independently set their own admissions requirements discouraged student diversity in dual credit programs. Participants whom stated this expressed concern over the admissions criteria some institutions set when determining if a student qualified to enroll in a dual credit course within their institution. For example, a student's current high school GPA is often a sole indicator of the dual credit program admission's process for many institutions. Since each institution has the ability to set their own GPA requirement for admission purposes, this leaves some students ineligible to participate in dual credit courses at one institution, but may qualify for dual credit courses at a different institution. Andrew mentions that:

Here, if you dropped below a 2.0 GPA, you have to repeat the course for a better grade before you're allows to take any more dual credit because we don't want to take them into a hole. They'll go straight to academic probation and fight financial aid probation and that's just not the work we want to do here. We want to help them; we don't want to hinder them. It's a little stricter here than at other [institutions].

Since there is no statewide policy that sets a specific GPA requirement for dual credit students, minority student groups may be disqualified from enrolling in many dual credit programs at institutions across the state.

Participants mentioned that when referring to student GPA trends, the Indiana Department of Education has data recorded and posted publicly showcasing that minority students are in fact earning significantly lower GPA scores than their White, non-Hispanic peers.

Many agreed that they felt this data alone proved that having strict admissions requirements for dual credit courses may be one of the primary reasons that Indiana still has low representation of low-socioeconomic and minority students within their dual credit programs, despite their other attempts at creating policy with the goal of increasing such representation.

Summary of Semi-Structured Zoom Interview Results

It is apparent through participant responses to the interview questions that not many state education policies directly impact the procedures that are implemented within dual credit programs at higher education institutions. Instead, it was deduced that state education policies have more of a direct impact on K-12 school districts, with an indirect influence on certain aspects of dual credit programming at higher education institutions. For instance, participants noted that state education policies such as the mandate requiring students who qualify for Indiana's free/reduced lunch program to receive a full waiver of their dual credit tuition payment. This waiver does not require any dual credit stakeholder to pay for the balance of the tuition for those qualifying students. This state education policy was observed to have the largest influence on higher education procedures when developing and improving dual credit programs.

Particularly interesting with this state education policy having such a large influence over dual credit programming procedures in higher education institutions, is that it was designed to assist students of low-socioeconomic backgrounds in their application and enrollment process into dual credit programs. However, when participants reviewed their student demographic data they described that there was little to no relative balance of minority student groups to those of White student groups within the participating institution's dual credit programs. The topic of there being a stark difference between percentages of minority students versus percentages of White students raised concern with all participants during the interview process. Thus, an

emerging theme of whether or not this particular state education policy is truly benefiting minority group students arose amongst all participants.

In connection, participants began expressing additional concerns that since the stricter Higher Learning Commission dual credit teacher credentials were initiated, the number of dual credit instructors significantly decreased overall. Participants began wondering how this will later influence student diversity within dual credit programs statewide. Many teachers in rural regions or from lower socioeconomic school districts do not have the funds or institutional support to complete a more advanced degree, especially when teaching stipends are minimal to null. In other words, if teachers from rural regions or lower socioeconomic school districts are no longer qualified to teach dual credit courses, their students will be provided less opportunities to participate in dual credit courses. This potentially enlarges the gap between minority student groups and White student groups within dual credit programs based on socioeconomic trends and data. This may then also create a ripple effect, as stated by participants, to discourage diversity amongst dual credit teachers as well.

CHAPTER V: IMPLICATIONS AND CONCLUSIONS

Introduction

This qualitative education policy implementation study researched the relationship between the influence of Indiana state education policies on the partnership strategies implemented within dual credit partnerships in Indiana. The study also explored how those policy implementation strategies influenced the diversity of students enrolled in dual credit programs in Indiana. Ultimately, the primary purpose of this study was to investigate how state education policies influence dual credit partnerships and how their policy implementation strategies influence student diversity in dual credit programs. This chapter is a discussion of the main results of the study as related to the literature on dual credit programs and state education policy. Also discussed in this chapter are the connections of these findings on the influence of student diversity within dual credit programs. The chapter concludes with highlights on the limitations of the study, areas for future research, and a brief summary.

This chapter contains discussion and future research possibilities to help answer the following research questions:

Central Research Question

RQ1: How do different education policy implementation strategies influence student diversity in dual credit programs in Indiana?

Grounded in policy implementation theory, the primary researcher conducted a study where a more comprehensive understanding of the policy implementation strategies used within Indiana dual credit programs and how they influence student diversity within them was obtained. Policy implementation theory is a framework for determining how actionable policy implementation strategies influence the success of the policy goals and objectives. In the dual

credit education arena, it was essential to understand not only what was implementable and what worked, but rather explore under what conditions those various education policies were implemented and successful.

Through a policy implementation framework, this study was able to reveal the policies, people, and places that shaped how implementation unfolded and how interactions among them helped to explain implementation outcomes within Indiana dual credit partnerships. The Indiana education policies, most commonly referenced by participants, were discussed in a way that highlighted their respective successes with promoting diverse student enrollment in dual credit programs. This information serves as a way to encourage other school leaders to advocate for similar equitable approaches when initiating their dual credit program partnerships and procedures.

Analysis

Dual credit programs are approached and implemented in drastically unique ways throughout the United States. Due to this, there has been and continues to be an increase in the gap of low-socioeconomic student enrollment and participation in dual credit programs versus mid- to high-socioeconomic students. The policy implementation framework of this study afforded the researcher the ability to address core gaps between the participation rates of diverse sets of students within Indiana dual credit programs. The research data illustrated the stark difference amongst low-socioeconomic student participation and mid- to high-socioeconomic student participation in Indiana dual credit programs. Utilizing a policy implementation framework, the researcher was also able to compare Indiana education policy language to the dual credit institutional procedure language detailed by the research participants. In Indiana specifically, education institutions have attempted to decrease the student diversity gap by

utilizing various policy implementation strategies to encourage greater student diversity within their independent dual credit programs. The researcher utilized the policy implementation framework to highlight the successes of these specific Indiana education policies and their attempt to encourage greater student diversity within dual credit programs.

By policy, each higher education institution in Indiana has the ability to develop their dual credit programs unique to their institutional preferences. However, the following Indiana state education policies were the most commonly mentioned as playing a prominent role in the decision to implement certain strategies within the dual credit programs at participating institutions. Each of the assessed state education policies and their influence on implementation strategies and student diversity within Indiana dual credit programs are described in detail in the following sections.

Free and Reduced Lunch Status

The Indiana Department of Education designed a policy from the National School Lunch, School Breakfast, and Special Milk program. This Indiana policy is more commonly referred to as the Indiana Free/Reduced Lunch Program Dual Credit Tuition Waiver. In regard to its influence on dual credit programming, the policy states that full dual credit tuition must be completely waived for qualifying students, with a reduction in textbook costs and other course required fees. Schachter (2014) explained that most states that can fund the tuition for dual credit courses offer families considerable savings of anywhere from \$800 to \$1,000 in college tuition. Participants stated that the tuition waiver for students qualifying for free/reduced lunch, in the state of Indiana pulls no monetary supply from any stakeholder.

An important aspect to take note of with this policy, however, is that although tuition may be covered for qualifying students, there are only certain dual credit courses that qualify for

this full tuition coverage. For example, Indiana has mandated, through this education policy, that the dual credit courses must be designated as Priority Liberal Arts or Priority Career and Technical Education courses on the State Approved Course Titles Summary document and taught in a high school setting. There must also be an agreement made between the School Corporation and the public postsecondary institution (ICHE, 2019). Karp et al. (2004) claimed that discovering methods to cover the cost of student enrollment in dual credit programs avoids the barrier of low social class students not having the same educational opportunities of and access to programs that their middle and upper social class peers do. Even though only certain courses have their tuition fully covered for students qualifying for the Free and Reduced Lunch Program, it can be determined that this particular Indiana education policy mandate was a specific attempt to decrease the equity gap in accessibility to dual credit programs for socioeconomically disadvantaged students.

Participants agreed that this Indiana education policy was one of the most influential state education policies in the dual credit program development and reformation processes. Participants also stated that this policy encouraged student diversity within dual credit programs, as financial standing is one of the primary concerns of students when deciding to enroll in dual credit programs. One component of the data, in connection with this state policy and its intended influence on dual credit programming procedures, is that low-socioeconomic students are still recognized as less than half of the overall student body in dual credit programs amongst participating institutions. For instance, the data reported from the survey and interviews stated that approximately 17% to 27% of students participating in Indiana dual credit programs were identified as low-socioeconomic. It was believed by the participants that the Free and Reduced Lunch dual credit tuition waiver increased the percentage of low-socioeconomic students

enrolling in dual credit programs, however, there is still not an equivalent number of low-socioeconomic students versus medium- to high-socioeconomic students participating in Indiana dual credit programs.

As dual credit continues to be an emerging topic in the education landscape, more longitudinal data is necessary to determine if this state education policy truly had a positive influence in trending upward the number of low-socioeconomic students in dual credit programs. Nonetheless, if dual credit programs across the nation are limited for reasons including funding, students who are members of low-socioeconomic groups will still have the most to lose in regard to their pursuit of educational equity and postsecondary study access (Nelson & Waltz, 2017). Participants verbalized during their interviews that their institutions only recently began collecting demographic and other forms of data on dual credit students, but most were unable to accurately state if the data their institution had stored was prior to the Free and Reduced Lunch dual credit tuition waiver education mandate or after. Even so, tracking the Free and Reduced Lunch data in addition to demographic data is necessary for a more comprehensive analysis.

HLC Teacher Credentials and Requirements

Another state education policy that was recognized as highly influential by participants was the Higher Learning Commission's (HLC) Teacher Credential Requirements to teach dual credit courses. This was documented as an influential piece of education policy on dual credit program procedures and student diversity in dual credit programs. When the education policy mandated more advanced credentials and a stricter approval process, higher education institutions had to re-assess their list of previously qualified dual credit instructors and notify them that they no longer qualified for teaching the dual credit courses. Unfortunately, many participants recognized that this particularly impacted school districts in low-socioeconomic

areas. This was due to those teachers not having their advanced degrees, but were working towards earning their advanced degrees. Thus, many formerly approved dual credit teachers were dismissed from teaching dual credit courses until they were in possession of their advanced degrees. Also, due to areas in low-socioeconomic regions losing dual credit instructors based on stricter credentialing requirements, the opportunities for low-socioeconomic students to register and enroll in dual credit programs also dwindled.

It is essential to the success of the dual credit programs that the instructors teaching them are as qualified and as credentialed as any college professor would be for that specific content area. The amount of transition years, however, when stricter mandates were put in place, did not provide much time nor incentive for educators to obtain these more advanced credentials. Requiring credentialed and qualified dual credit instructors does matter, participants stated, because individuals who have obtained a Master's degree in their specific content area have proven their ability to think critically and defend their work in an extensive format (Horn & Parks, 2018). However, the immediate change in this policy caused for tumultuous periods for both dual credit partnering institutions.

Participants claimed that because they noticed a downward trend of available teachers to teach dual credit courses, based on the stricter credentialing system, higher education institutions began to develop HLC certification programs and incentives for Indiana educators. These new programs and incentives, participants explained, allowed for tuition reductions and/or waivers for Indiana educators to earn their Master's degree or 18-credit hours within their concentration from their respective higher education institution. Although this incentive sounds promising on the higher education institution end, most participants stated that Indiana educators are still relatively unmotivated to pursue higher credentials. The explanation provided explained that this

was because their employing school district would not provide a monetary incentive for teaching dual credit courses (Horn & Parks, 2018). In other words, participants noted that most high school teachers would rather teach traditional high school courses, without pursuing an advanced degree, when they are paid the same or a minimal stipend increase if teaching dual credit courses. For Indiana educators, participants claimed, the incentive simply is not where it needs to be if Indiana wants to see an increase in educators holding advanced degrees to teach dual credit courses.

Core Transfer Library

The Indiana Core Transfer Library (CTL) was a development in response to a 2005 legislation to enable students to transfer college credits from one higher education institution to another. The courses recognized on this list are generally transferable amongst all Indiana public higher education institutions and oftentimes six independent higher education institutions when meeting additional grade admissions requirements (ICHE, 2019). The CTL is maintained by the CTL subcommittee of the Statewide Transfer and Articulation Committee (STAC) with input from Indiana's public and independent higher education institutions (ICHE, 2019). Participants stated that the updates to the CTL allowed their dual credit departments to reflect on their dual credit course offerings to see if those courses were still in high demand for high school students. The CTL updates also allow higher education institution dual credit administrators to check their institution programs to see if there were other courses offered on campus that would be of high interest to their high school partners as a dual credit course option.

Credit transferability is an important component of successful dual credit programs that participants recognized. When students enroll in a dual credit course, they are typically planning on utilizing those college credits to transfer into their desired college degree program (Bragg et

al., 2006; Chumbley, 2015; Hoffman et al., 2008). Therefore, through the CTL, dual credit students can be assured that their college credits will be widely accepted within public higher education institutions across the state of Indiana and may also earn credit transferability in six independent higher education institutions. Participants noted that due to this planning component implemented by high school students, when selecting which dual credit courses to offer, they felt it completely necessary to reflect on and align with the CTL courses.

Participants also noted that this state education policy may have an indirectly positive influence on student diversity within dual credit programs within Indiana. As noted within the Free and Reduced Lunch Program policy influences, students from low-socioeconomic backgrounds are more selective in the type and amount of dual credit courses they apply to. This is primarily due to their ability in part to not only afford the tuition for the course, but also afford the course material fees (i.e. textbooks, equipment, etc.). Knowing that courses are a part of the CTL, students from low-socioeconomic backgrounds may be more willing to register and enroll in the dual credit course.

In addition, students who enroll in courses recognized in the CTL, also have the ability to earn credits towards graduating high school with a Core 40 with Technical Honors or Core 40 with Academic Honors diploma. Much like the percentages of minority group representation within dual credit programs, the percentages of minority group representation of students earning the Core 40 with Technical Honors or Core 40 with Academic Honors high school diploma is also significantly less than the White dominant culture. Across the entire state of Indiana, only 18% of students identifying as Black/African American earned a Core 40 with Academic Honors high school diploma, whereas 41% of students identifying as White earned a Core 40 with Academic Honors high school diploma (ICHE, 2020). Ultimately, it can be inferred that as more

minority students enroll and actively participate in dual credit courses recognized on the CTL, the percentage of minority students earning a Core 40 with Technical or Academic Honors high school diploma will also increase. Thus, the CTL is a valuable Indiana education policy that higher education institution dual credit administrators need to be reflecting on and aligning with on a frequent basis.

Priority Course List and Pricing

The priority course list that participants referred to as being another big influence on dual credit programming and student diversity within dual credit programs consists of the Priority Liberal Arts and Priority Career and Technical Education (CTE) Dual Credit Courses. These courses are designated on the State Approved High School Course Titles Summary, where the courses marked with an “x” are those found in the CTL and have been approved by the Indiana Commission of Higher Education. These courses are included on the Priority Dual Credit/Liberal Arts Crosswalk or to be included on the Priority Course List/CTE where credit applies to undergraduate degree programs or certificates (ICHE, 2019). Courses on the Priority Dual Credit Course Lists, per Indiana legislation, can only have a fee of \$25.00 per college credit for high school students. The higher education institution thus received funding as part of the ICHE’s Dual Credit biennium budget recommendation for offering courses at such a discounted rate (ICHE, 2019). These courses are also recognized as part of the full tuition waiver for students who qualify for Indiana’s Free and Reduced Lunch Program.

Participants stated that they frequently reflected upon the Priority Liberal Arts and Priority Career and Technical Education (CTE) Dual Credit Courses due to Indiana’s recent push toward including more Career and Technical Education courses for high school students that can provide college credit. Indiana recognized that not all students have the desire to matriculate into

a college degree program, but could benefit from earning college credits through Career and Technical Education dual courses to help place them at a more competitive advantage in the workforce, as stated in the state's Strategic Workforce Plan (State of Indiana, 2021). The Strategic Workforce Plan implemented the Priority Liberal Arts and Priority Career and Technical Education to ensure that, "all Hoosiers have equitable opportunities for lifelong learning, increasing personal economic mobility and providing employers the talent to grow and diversify their workforce" (Governor's Workforce Cabinet, 2020, p. 1). In other words, Indiana shifted their education policies away from being primarily college focused to incorporating the development of employable skills and training of students interested in pursuing careers within Indiana's labor and workforce.

This shift in focus created a ripple effect in dual credit departments across Indiana higher education institutions. Participants noted that to remain competitive with their high school partners, they had to provide a wider array of course types that aligned with the Priority Course lists. Although this policy significantly influenced dual credit program procedures, it did not seem to necessarily influence diversity within dual credit programs, as CTE courses are still relatively low in enrollment numbers in comparison to the more academic focused dual credit courses. Another issue that participants recognized, that was discussed as being a potential issue behind the CTE course offering options, was that some CTE courses required additional equipment and material fees, where fees are expected to be covered by the student (Johnson, n.d.; Parker et al., 2019; Tandberg & Laderman, 2018; Zinth, 2016). This may be a negative influence on student diversity within CTE courses, as students from low-socioeconomic backgrounds may be unable to afford the additional costs, even if their tuition fee is fully waived through Indiana's Free and Reduced Lunch program policy.

Summary

When assessing this information through a policy implementation framework, it is evident that the policies most commonly addressed by participating higher education institutions in Indiana may only be successful under certain conditions. Those conditions, may have to do with the courses that are available at a student's education institution such as: the accessibility of Priority Liberal Arts or Priority Career and Technical Education courses based on teacher availability to teach those courses. For example, schools located in areas serving a majority of low-socioeconomic students, may be at a disadvantage due to their ability to offer dual credit teacher stipends and/or other benefits that are key in recruiting more certified dual credit instructors. Where these low-socioeconomic school districts may struggle in their success of encouraging more student diversity in their dual credit programs, more privileged and financially robust school districts may thrive. The strategies utilized by the participants in their implementation of Indiana education policies at their respective Indiana higher education institutions, therefore, become successful based not only on the intent of the policy, but the context the policy is placed within.

It also became evident that state education policies were ultimately influenced by larger federal education policies put in place years prior. Through a focus on Indiana education policies, it was observed that states have significant autonomy in how they implement federal education policies as well as how they develop state specific policies based on the larger federal policies. The Free and Reduced Lunch dual credit tuition waiver is a good example of Indiana developing a new education policy based on the larger federal policy. Although this is not the only example, it is one example that emphasizes the influence that different education policy

implementation strategies have on student diversity in dual credit programs at a national and sequentially a state level.

Consequentially, the development of new state education policies eventually has a ripple effect in how the policies are implemented within institution specific dual credit programs. In this case, the higher education institutional partners in Indiana discussed, in various capacities, multiple strategies utilized within their dual credit partnerships and how they were influenced by Indiana education policies. Participants in the study emphasized the notion that Indiana higher education institutions have the flexibility to design their dual credit programs as independent entities. In other words, no two higher education institutions design their dual credit programs in the same way nor do they implement state education policies in the same way. However, due to this flexibility, this study was able to highlight those policy implementation strategies that were deemed as most successful in encouraging student diversity in Indiana dual credit programs.

Implications and Suggested Practice

There are several implications and suggestions for practice based upon the research and data collected from this study on the influence of education policy on dual credit program procedures and student diversity. Table 9 details some main implications and suggested practices based on the study results:

Table 9

Implications and Suggested Practices Rationale

<i>Implication/Suggested Practice</i>	<i>Rationale</i>
<i>Awareness</i>	Dual credit education professionals must be aware of the barriers that minority students face that work against them in their quest for equality and equity within their interactions on and off the college campus.
<i>Collect Annual Program Data</i>	It is essential to conduct a complete analysis of each implemented state education policy, the date it was implemented, and its relative impact on student diversity within dual credit programs.
<i>Advocate for Policy Clarity</i>	State education policies need to provide more clear direction and suggestion on how dual credit partners can financially support their historically disadvantaged students to provide more equitable access to and participation in dual credit programs.
<i>Streamline HLC Credentialing</i>	To encourage more teachers to become dual credit credentialed, partnering institutions should work together to develop pathways and plans that would incentivize more educators to pursue an advanced degree or necessary credit hours to qualify to teach dual credit courses.

Conclusions from the data report state that the percentage of White students within dual credit programs ranged between 67% to 87% across participating institutions, whereas students identifying as Black/African American made up approximately 2% to 6% of dual credit students across participating institutions. Students identifying as Hispanic/Latino represent approximately 1% to 16% of the dual credit student body, while students identifying as Asian represent approximately 2% to 5% of the dual credit student body. The disproportion of White students compared to other minority student race/ethnicities within dual credit programs in Indiana raises a red flag that disparities may not be getting fully addressed. This may also imply that the state

education policies that are being mandated may not have as much of a positive influence or outcome on student diversity within dual credit programs as may have been intended.

As one of Indiana's goals is to encourage greater equity within dual credit programs, student diversity becomes a prevalent and essential topic of study. To successfully lead identity-based student diversity initiatives, dual credit education professionals must be knowledgeable about and understanding of the ways that minority students are disadvantaged and disenfranchised within colleges and universities (Stewart, 2016). Dual credit education professionals must be aware of the barriers that minority students face that work against them in their quest for equality and equity within their interactions on and off the college campus (Huffman et al., 2019; Kalir & Dillon, 2020; Patrick, 2019). Participants noted that it was essential for them to update themselves on new policies revolving around dual credit, as well as reading current research on how students are impacted through their dual credit participation. When dual credit education professionals develop this particular knowledge and skill set, they will be better equipped to explain to other school leaders and policymakers the overarching value that identity-based student development initiatives have on dual credit enrolled students.

The data from this study also indicates that although state education policies are being implemented with the goal of helping to encourage student diversity within dual credit programs, the policies have proven to be minimally influential in increasing the actual diversity of the student body within Indiana dual credit programs. Additional research needs to be conducted that incorporates more longitudinal data, documenting student demographics from pre-education policy implementation in comparison to post-education policy implementation (Karp et al., 2004; Short & Eadens, 2019; Zinth & Barnett, 2018). As it is clear that not one single policy is influential in encouraging student diversity, but many factors of several state education policies,

it is essential to conduct a more comprehensive breakdown and analysis of each implemented state education policy, the date it was implemented, and its relative impact on student diversity within dual credit programs.

Higher education dual credit administrators can develop more thorough and annual data collection procedures that address student demographical data such as: race, ethnicity, identifying gender, socioeconomic status, lunch status qualification, grades, and GPA (Singleton & Straits, 2009). In addition, attached spreadsheets documenting state education policy changes, mandates, and implementation dates would be beneficial to take note of annually as well. This data should be collected and stored in an online software/platform accessible only to designated individuals at the higher education institution. The data collection procedure suggested consists of a combination of data collecting procedures that participants in this study conducted at their respective higher education institution. These procedures were recognized as particularly beneficial in identifying disparities and gaps within the program, however, would be even more beneficial when combined in the format suggested above. The data should be stored and evaluated biennially to reflect on any potential data trends or themes that may be occurring within the program. At the state-level, these data collection procedures should be regulated, so that all higher education institution dual credit program administrators are collecting the same type of information and reporting it to a state-level dual credit task force for an analysis of state dual credit data as a whole. The statewide data should then be stored and evaluated on a more longitudinal basis of every four to five years.

Another important implication of this research is that it suggests that state education policies need to provide more clear direction and suggestion on how dual credit partners can financially support their historically disadvantaged students to provide more equitable access to

dual credit programs. When states face funding shortages they risk losing their dual credit programs statewide. Legislators and congressional leaders choosing to eliminate dual credit programs across the state is a potential risk that all states could find themselves facing if under significant fiscal pressure (Tandberg & Laderman, 2018). If a state decides to eliminate dual credit programs due to lack of funding or security, students from low-socioeconomic backgrounds chances of matriculation into a college degree program and retention throughout their second year of college may significantly decrease (Veldman et al., 2019). To prevent this issue from occurring, it is recommended that a statewide dual credit framework is established to address uneven participation especially by low income and minority students.

When states have a task force dedicated to understanding the complexities of their statewide dual credit programs, it provides more opportunities to advocate for direct funding on the grounds of thorough research of program benefits for diverse sets of students. At this time, not all states have a designated dual credit task force or statewide dual credit committee, which is something that dual credit administrators and other school leaders could advocate for or begin initiating the creation of through extensive outreach and communication to others who are advocates of dual credit programs throughout their respective states. NACEP and DCAP leaders would be individuals that dual credit state advocates could get in contact with to begin the process of reaching out to other dual credit advocates and leaders within their independent states.

Another suggestion, based on the literature and data from this study would be for higher education institutions to develop more streamlined pathways for educators to earn their dual credit qualifying credentials in their respective states. This is an essential component, as states cannot initiate a push for more dual credit courses to be offered to high school students, when there are little to no educators who can teach them. To encourage more teachers to become dual

credit qualified and credentialed, partnering institutions should work together to develop pathways and plans that would incentivize more educators to pursue an advanced degree or necessary credit hours to qualify to teach dual credit courses. More research can be conducted on what incentives, other than purely monetary incentives, teachers can be offered to encourage them to pursue and complete these more advanced credentialing requirements.

Limitations

One limitation of the study included that the primary researcher only examined the lead dual credit administrator at the Indiana higher education institution involved in a dual credit partnership and did not examine the secondary education institution involved in the partnership. This potentially limited data that could have added to the type of education policies that have influenced dual credit programs from the secondary education side of the partnership. Participants in this study noted that their institution's dual credit department often deferred to their secondary education partners to update dual credit program needs based on new or revised state education policies.

A second limitation was that the sample included 83% of Indiana higher education institutions that were accredited through the National Alliance of Concurrent Enrollment Partnerships (NACEP) and/or the Dual Credit Accreditation Program (DCAP). This eliminated participation from other Indiana higher education institutions from providing information on their dual credit programs and procedures based on state education policies. Additional participants may have had provided the researcher with more opportunities to address longitudinal data on dual credit program procedures and trends across the state of Indiana.

A third limitation was that the study only examined the lead dual credit administrator from the NACEP and DCAP accredited Indiana higher education institutions and did not include

faculty or student input. Although the lead dual credit administrator at the higher education institution is expected to be the expert on their institution's dual credit program, this may have eliminated opportunities for faculty or students to share their expertise on state education policy influence on the dual credit program and their experiences within the institution's dual credit program.

Recommendations for Future Research

A recommendation for future research could include broadening the participant pool. Broadening the spectrum of potential participants may provide researchers, dual credit administrators, school leaders, and education policymakers with data relevant to multiple dual credit stakeholders. Additional participants may include:

- Higher Education Dual Credit Administrators
- K-12 Dual Credit Administrators
- Higher Education Dual Credit Liaisons
- K-12 Dual Credit Instructors
- Dual Credit Students (present and former)
- Dual Credit Accrediting Organization Leaders
- State Education Policymakers

Increasing the participant pool of dual credit stakeholders may allow more comprehensive data to be collected from multiple perspectives of dual credit within the educational landscape. When expanding the participant pool, researchers may be able to gather more specific information as to how the education policies are directly and indirectly influencing dual credit programs and procedures amongst various dual credit stakeholders. From this expanded research, it could be learned just how positively and/or negatively education policies are influencing student diversity

within dual credit programs. Some education policies may have been designed with the intention of increasing student diversity within dual credit programs, but the research may provide detailed information as to how that policy may not be as positively influential for those students classifying as low-socioeconomic.

Researchers interested in contributing to this study may consider reproducing the methodology of the study utilizing the pre-interview survey and following up with the interview questions using a participant pool that consists of higher education dual credit administrators and/or K-12 dual credit administrators from their respective state. Researchers may choose to slightly modify the pre-interview survey questions or interview questions if reproducing the study with a participant pool consisting of dual credit liaisons, dual credit instructors, dual credit students, dual credit accrediting organization leaders, or state education policymakers. Question modifications may consist of rephrasing to more directly address the expanded participant pool. For example, if participants are dual credit students, it may not be appropriate to ask how the institution develops institutional procedures for dual credit programs, but it may be appropriate to ask how the institutional procedures for dual credit programs directly impacts them as a student. These slight adjustments may be necessary to ensure that the framework for the question development is in alignment with the knowledge of dual credit that the participants are expected to have.

Final Conclusions

Overall, the research conducted within this study acknowledged the effectiveness of progressively developing dual credit programs on a national platform by recognizing best practices implemented at state and local levels. Performing a qualitative study grounded in policy implementation theory, the primary researcher was able to determine how certain Indiana state

education policies influenced implementation strategies utilized within Indiana dual credit programs. The primary researcher was then able to assess how well those various implementation strategies encouraged student diversity within the dual credit programs.

The literature and data results from this study conclude that state education policies do influence dual credit program procedures, but they may not have as positive or as large of an influence on student diversity within dual credit programs as education policymakers may have expected. There are some state education policies that directly relate to dual credit programs, such as the HLC dual credit educator credentialing requirements and the full dual credit tuition waiver for students that qualify for Indiana's Free and Reduced Lunch program. However, others may be influencing dual credit program procedures more indirectly.

Through this research it became evident that federal education policies influence state education policies, which then influence education policy implementation strategies at the local level. Those education policy implementation strategies then ultimately influence various aspects of local education issues such as student diversity within dual credit programs. As discussed previously, state education policy development based upon federal education policies do influence how local education issues are addressed. When issues such as the representation of diverse sets of students within dual credit programs are addressed, researchers can determine how specific policy implementation strategies are influencing the gap of such representation. Through this study, it became evident that because Indiana higher education institutions have the ability to design their dual credit programs as independent entities, the influence that their implementation strategies have on student diversity stem not only from the policy intent, but the context in which the policy is applied.

Short and long term recommendations of practice for dual credit administrators and other school leaders would be to collect specific demographic data from dual credit enrolled students to be stored and evaluated on an annual basis. This collected data should also be saved for future longitudinal research. Conducting such extensive data collection and research on a higher education institution's dual credit enrolled students would contribute valuable data on the influence that education policies and implementation strategies are having on students. Ultimately, this research could benefit higher education institutions to encourage greater student diversity within dual credit programs in the future.

The researcher determined that there must be increased cooperation among higher education institutions and that higher education institutions should be collecting more data on the student demographics benefitting from dual credit. Further research on the topic could include evaluating other potential barriers such as type of course offerings, course interest, and academic planning and preparedness. Overall, an increase in cultural awareness of the students enrolling in each institution's dual credit program, particularly as it relates to funding, is essential to improve student access to dual credit programs.

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Appendix A

Survey Questions:

1. Did your institution have a policy or procedure in place specifically addressing dual credit course tuition payment expectations for the academic year of 2019-2020?
 - a. Yes
 - b. No

2. Who was expected to make the dual credit course tuition payment for the academic year of 2019-2020? Select all that apply.
 - a. Parent/Student (regardless of SES)
 - b. Parent/Student (Mid-High SES only)
 - c. High School District (regardless of SES)
 - d. High School District (Low-SES only)
 - e. University Partner (regardless of SES)
 - f. University Partner (Low-SES only)
 - g. Combination of High School & University Partner (regardless of SES)
 - h. Combination of High School & University Partner (Low-SES only)
 - i. State Fully Funded (regardless of SES)
 - j. State Fully Funded (Low-SES only)
 - k. Other: Please explain

3. What financial support services were provided to actively enrolled high school students from Low-SES backgrounds interested in participating in dual credit earning courses for the academic year of 2019-2020? Select all that apply.

- l. None
- m. Fundraising
- n. Sponsorships
- o. Scholarships
- p. State Grants
- q. Federal Grants
- r. Other: Please explain

4. What percentage of your district's actively enrolled high school students were from low-SES backgrounds for the academic year of 2019-2020?

s. Please fill in: _____

5. What was the demographic breakdown (race, SES, gender) of the students enrolled in your institution's dual credit program for the academic year of 2019-2020?

a. File Upload: _____

6. Do you have longitudinal data available for the above questions?

- a. Yes
- b. No

Appendix B

Semi-Structured Interview Questions:

1. What data about college credit earning high school students does your institution collect from partnering high schools?
2. What data collection processes/procedures does your institution use when collecting data about college credit earning high school students?
3. How do you use the data about college credit earning high school students within your institution?
4. What state education policies does your institution actively refer to when developing institutional policies/procedures for your dual credit program?
5. How does your institution obtain information about state education policies?
6. What state education policies (if any) most influence the local procedures your institution develops for their dual credit program?
7. How do you develop institutional procedures for your institution's dual credit program based on state education policies?
8. What are some of the procedures your institution has for their dual credit program?
9. What institutional procedures/policies most encourages student diversity (race, ethnicity, SES) within your dual credit program?
10. What institutional procedures/policies most discourages student diversity (race, ethnicity, SES) within your dual credit program?

Appendix C

Recruitment Email Script:

Good afternoon,

My name is Alexandra Horton and I am a doctoral candidate in Governors State University's Doctor of Education: Interdisciplinary Leadership in Higher Education Administration program. I am reaching out to you to seek your participation in my research project exploring the influence of state education policies on student diversity in dual credit programs within Indiana. As you are recognized as your institution's lead dual credit administrator, I believe that your expertise on the subject will be invaluable to my research.

I am requesting your participation in the completion of a brief pre-interview survey followed by a virtual interview hosted through Zoom. The interview will be recorded and transcribed through Zoom, but will remain confidential, as I (the primary researcher) will be the only individual with access to this information. All identifiable information will be removed from the study.

If you agree to participate in this study, would you please provide me with a brief letter of consent using your institution's letterhead? This information is being requested for IRB approval. An official letter of consent will be sent to you for signed approval upon IRB acceptance. Thank you for your time and consideration. I look forward to hearing from you.

Sincerely,

Recruitment Phone Call Script:

Hello, my name is Alexandra Horton and I am a doctoral candidate in Governors State University's Doctor of Education: Interdisciplinary Leadership in Higher Education Administration program. I am reaching out to you to seek your participation in my research project exploring the influence of state education policies on student diversity in dual credit programs within Indiana. As you are recognized as your institution's lead dual credit administrator, I believe that your expertise on the subject will be invaluable to my research.

Your participation would include the completion of a brief pre-interview survey followed by a virtual interview hosted through Zoom. The interview will be recorded and transcribed through Zoom, but will remain confidential, as I (the primary researcher) will be the only individual with access to this information. All identifiable information will be removed from the study.

At this time, if you agree to participate in this study, would you please provide me with a brief letter of consent using your institution's letterhead? This information is being requested for IRB approval. An official letter of consent will be sent to you for signed approval upon IRB acceptance.

Thank you so much for your time and consideration. I am looking forward to speaking with you upon my IRB approval.

Appendix D

Governors State University Department of Education

Title of Research Study: Policy Implementation Strategies: State Education Policy Influence on Student Diversity in Dual Credit Programs

Principal Investigator:

Key Information:

The following is a short summary of this study to help you decide whether to participate or not. More detailed information is listed later on in this consent form.

- Your consent to participate in this study is being sought through a description of activities in this form. Participation in this study is voluntary and you can choose not to participate or withdraw at any time without any penalty.
- The purpose of this study is: Researching the influence of state education policies on dual credit partnerships is essential to understanding the strategies that are successful in shaping education policies that encourage more student diversity in dual credit programs. The study will also address the rationale behind each participating institution's policy implementation strategies and the state policies that influenced those decisions. Through this research, it will be learned how education institutions and policymakers choose to revise or develop updated state and/or institutional policies to encourage more student diversity in dual credit programs.
- You will be asked to complete a brief pre-interview survey and participate in a follow-up virtual interview via Zoom.
- We expect that your participation in this study will take a cumulative 60-90 minutes to complete both the pre-interview survey and follow-up interview.
- The risks of participating are minimal. Although there are no direct benefits of the study for you, this information will be able to provide recommendations for dual credit partnerships in developing and implementing clear education policies to encourage greater student diversity in dual credit programs.

Why am I being asked to participate in this research study?

We are asking you to participate in this research study because you have been identified as the lead dual credit administrator at your institution.

What should I know about participating in a research study?

- Whether or not you participate is up to you. You can choose not to participate.
- You can agree to participate and then later change your mind.
- Your decision will not be held against you or result in penalty.
- You can ask all of the questions that you want before you decide.

What happens if I agree to participate in the research study?

- The research activities will include your completion of the pre-interview survey, followed by a virtual interview held via Zoom.
- The length of your participation in the study will be approximately 60 – 90 minutes in full.
- You will interact only with the primary researcher of this study.
- All research will be done virtually and in an online only format.
- The study procedures will only be performed once.
- The pre-interview survey and virtual interview are the aspects of the study you will participate within.
- Agreement to be recorded during the virtual interview will be sought. The virtual interview will be recorded via Zoom and stored on the primary researcher's personal and password protected hard drive.

Will being in this study help me in any way?

We cannot promise any benefits to you or others from your taking part in this research.

Is there any way being in this study could be bad for me?

The risks of participating in this study are no greater than those someone would experience in day-to-day life.

What happens if I do not want to be in this research?

Participation in research is voluntary. You can decide to participate or not to participate.

What happens if I say “Yes”, but I change my mind later?

You can leave the research study at any time and it will not be held against you.

What happens to the information collected for the research?

Your information or samples that are collected as part of this research will not be used or distributed for future research studies, even if all of your identifiers are removed. All data collected will be stored and secured in the primary researcher's personal and password protected hard drive. The primary researcher will be the only individual with access to this information.

Data Sharing

Results from this study (without any of your personal information) may be shared with other researchers to advance science and health. We will remove or code any personal information that could identify you before files are shared with other researchers to ensure that, to the best of our knowledge, no one will be able to identify you from the information we share. Despite these precautions, there is always the remote risk that there could be a breach of confidentiality, but we will do our best to avoid that risk.

What else do I need to know?

We will not ask you about child [or elder] abuse, but if you tell us about child [or elder] abuse or neglect, we may be required or permitted by law or policy to report to authorities.

Who can I talk to?

If you have questions, concerns, or complaints talk to the Principal Investigator

This research has been reviewed and approved by an Institutional Review Board (“IRB”). You may contact the IRB at irb@govst.edu if you have questions or concerns regarding your rights as a research participant. You may also contact the Director of Sponsored Programs and Research at 708/235-2846.

Signature for Adult 18 or older

Signing here means that you are agreeing (consenting) to participate in this research and that you are giving the researchers permission to use the information that they collect from your participation.

Signature of participant

Date

Printed name of participant

Signature of person obtaining consent

Date

Printed name of person obtaining consent

If you want a copy of this consent for your records, you can print it from the screen.

Appendix E

Reminder to Complete Survey Email Script:

Good afternoon,

This is Alexandra Horton (doctoral candidate in Governors State University's Doctor of Education: Interdisciplinary Leadership in Higher Education Administration program). I am reaching out to you to seek your participation in the completion of the brief pre-interview survey linked here: [survey link]. Your responses will remain confidential, as I (the primary researcher) will be the only individual with access to this information. All identifiable information will be removed from the study.

Your participation and completion of this survey is greatly appreciated, as your responses will provide a valuable and insightful look into the educational landscape of dual credit programs in Indiana. Thank you for your time and consideration. I look forward to reading your responses.

Sincerely,