

AN ABSTRACT OF THE DISSERTATION OF
Amy E. Gall for the degree of Doctor of Education

Presented on July 26, 2023

Title: Assessment of the Impact of Senate Bill 18(2007) on High School Dropout
in New Hampshire: A Theory of Change

Abstract approved:

 July 31, 2023

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There are extensive negative generationally perpetuating consequences related to high school dropout including economic, health, relationship, parenting, criminal justice, community engagement, tax revenue, and public welfare effects which disproportionately impact minority groups. In 2007 the New Hampshire legislature enacted Senate Bill 18, a statewide dropout prevention measure which effectively raised the compulsory school attendance age from 16 to 18 and created alternative learning plans for students who would otherwise drop out. The purpose of this study was to explore the efficacy of that policy change, using a Theory of Change to compare measurable outcomes with the intentions of policymakers who worked to enact the change. Empirical evidence indicated that raising the compulsory school attendance age had mixed and sometimes ambiguous results that could lead to either increasing or decreasing dropout rates. This study found that raising the compulsory school attendance age in New Hampshire did not have much effect on dropout and completion rates, as state data reports demonstrated these rates were already improving before passage and implementation of SB18(2007) and continued to do so at analogous rates afterward. A survey of school districts revealed that many districts are offering a wide range of dropout prevention services and programs.

Keywords: New Hampshire, education, high school, dropout, survey, theory of change

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ASSESSMENT OF THE IMPACT OF NH SB18(2007)

Assessment of the Impact of Senate Bill 18(2007) on High School Dropout
in New Hampshire: A Theory of Change

By

Amy E. Gall

A DISSERTATION

Submitted to

Plymouth State University

In partial fulfillment of
the requirements for the
degree of

Doctor of Education in Learning, Leadership, and Community

Defended July 26, 2023

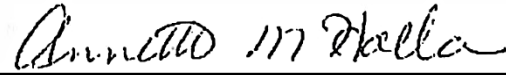
Degree Conferred August 31, 2023

ASSESSMENT OF THE IMPACT OF NH SB18(2007)

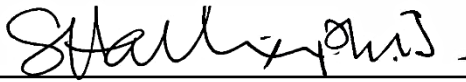
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Presented on Wednesday July 26, 2023

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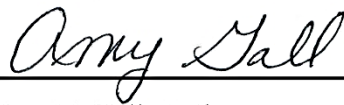


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Acknowledgements

I want to thank my family and friends for all of their love and support throughout the many long years it took me to complete this project:

Brian, without whose love and support I would not be here.

Bec, Alex, Justin, & Jessie for inspiring me to strive for a better version of myself.

Mom and Julie, for always believing in me – even when I didn't believe in myself.

Mentors who have encouraged, pushed, cajoled, and otherwise helped me to become a better scholar, researcher, and leader. In particular, I'd like to thank

Annette Holba, Kathleen Norris, Kathy Jablonski, Van Anderson



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Doctor of Education in Learning, Leadership, and Community

Assessment of the Impact of Senate Bill 18(2007) on
High School Dropout in New Hampshire: A Theory of Change
Amy E. Gall, Plymouth State University
Dissertation Defense: July 26, 2023

Executive Summary

Introduction: In 2007 the New Hampshire legislature enacted Senate Bill 18, a statewide dropout prevention measure which effectively raised the compulsory school attendance age from 16 to 18 and created alternative learning plans for students who would otherwise drop out. The purpose of this study was to analyze the efficacy of the SB18(2007) policy change in New Hampshire.

Problem of Practice: There are extensive negative generationally perpetuating consequences related to high school dropout which disproportionately affect minority groups. Empirical evidence indicated that raising the compulsory school attendance age has ambiguous and sometimes detrimental results. My focused problem of practice was to study high school dropout in New Hampshire with regard to the SB18(2007) policy change, and determine if current school practices align with policymakers' intentions. Until now, there has not been an independent assessment of this policy change.

Research Method: This is an explanatory sequential mixed methods summative outcome program evaluation using a three-part theory of change. The first phase of research was a qualitative records review of existing legislative records and archived media articles regarding the passage of SB18(2007) used to develop a program theory of policymakers' expectations. The second phase was a quasi-experimental time series of event dropout and completion rates of all New Hampshire public schools serving students in grades 9-12 over the 20-year period from 2001 through 2022 to determine how rates were affected by the policy change and implementation. The third phase was an online quantitative survey of dropout prevention specialists for all 99 public high school using questions from the NCES Dropout Prevention Programs and Services FRSS to determine an implementation theory of programs and services offered to students at risk of dropping out 15 years after the bill's passage. Program theory was compared with implementation theory and observed outcomes to ascertain the extent to which policymakers' goals had been met.

Summary of Findings: This study found that, in enacting SB18(2007), policymakers intended to lessen the social consequences of dropout by compelling public school districts to offer a variety of programs and services to better meet the needs of students at risk of dropping out school. Graphical analyses of New Hampshire public high school event dropout, completion, and alternative graduation credential figures revealed that raising the compulsory school attendance age in New Hampshire did not have much effect on dropout and completion rates, as state data reports demonstrated these rates were already improving before passage and implementation of SB18(2007) and continued to do so at analogous rates afterward. A higher percentage of students drop out of public alternative and charter schools than traditional high schools, however it is likely that many students who would have dropped out of traditional schools are graduating from those other placements. Since the state changed test providers from GED to HiSET, the number of uncredentialed dropouts has been similar to the number of adults earning an alternative graduation credential; it is possible that the number of uncredentialed New Hampshire residents is actually quite small. According to survey results, many school districts are offering a wide range of dropout prevention services and programs, while a small number are falling short of policymakers' expectations.

Limitation(s) of Study: A low survey response rate calls into question the validity of those findings. Given the observed outcomes presented here it is likely they were affected by outside influences superseding program interventions, but without an experimental approach other explanations for the effects seen in this study cannot be ruled out.

Implications/Significance of Study: Research results suggest that it is only a few schools which are lacking in services and programs for their at-risk students. Alternative learning plans prescribed by SB18(2007) seem to provide the flexibility needed for at-risk students to obtain either a regular or alternative graduation credential should they choose to do so, yet whether or not each student has access to the program that would work best for them is not a settled point given differences in the programs that are available from one district to another. An in-depth analysis of how the dropout prevention practices of individual school districts are related to their dropout figures might be illuminating in this regard.

Observed outcomes do not bear out the endorsement of strategies to nudge the dropout rate closer to zero as the statewide event dropout rate remains at only 1 to 2 percent of enrollments, and nearly all 12th graders complete school. Given the fact that, since the SB18(2007) policy change, poverty has been found to be the greatest factor affecting high school dropout nationwide, it is wishful thinking that we might ever get to 100 percent completion rate through high school programming in the absence of changes to broader social conditions. Although increasing compulsory school attendance age and requiring alternative learning plans for would-be dropouts did not cause remarkable changes in dropout and completion rates, those measures did not hurt either.

The "message" that came with the SB18(2007) increase in compulsory school attendance age was not meant for students, but for school leaders entrenched in the old seat-time system; alternative learning plans were meant to steer budget-writers, who choose the direction of government services based on what they fund, toward the new competency-based education system that is being employed in New Hampshire.

Chapter 1: A Problem of Practice

Failure to complete high school has negative effects for both the individual and society. When compared with citizens who receive a high school diploma or equivalency, individuals who drop out are subjected to economic consequences, earning significantly less over the course of their lifetime, and threatened by higher rates of unemployment. Dropping out is also correlated with health consequences such as shorter life span and higher incidents of mental health hospitalization, relational consequences such as fewer marriage prospects and greater likelihood of becoming a single parent, and social consequences such as higher rates of incarceration and less community engagement, while costing society in terms of increased criminal activity, lost tax revenue, and greater expenses for public assistance programs (Bridgeland et al., 2006; Chapman et al., 2011; Lehr et al., 2004; Messacar & Oreopoulos, 2012; Rennie Center for Education Research and Policy, 2009). Gender, race, and class appear to factor into which groups are disproportionately affected by these generationally-perpetuating effects, making high school dropout a social equity issue (Bell et al., 2015; Carnevale et al., 2009; Oreopoulos, 2009; Wolfe & Haveman, 2002). Yet students continue to drop out; in spite of previous policy measures to eliminate this phenomenon, the New Hampshire Department of Education (2019) reported 572 high school dropouts during the 2018-2019 school year. The problem of practice that I examined involves an assessment of how a recent state wide policy change, Senate Bill 18 (SB18(2007)), has impacted New Hampshire's high school dropout figures. There was some early indication that the policy might not be effective in reducing NH dropout numbers, but there had not been an assessment of the policy to this date.

Purpose

To understand how New Hampshire is dealing with the high school dropout problem, this research study analyzed a policy change in New Hampshire. The NH legislature passed Senate Bill 18 in 2007 to address high school noncompletion within the state by raising the compulsory school attendance age (CSAA) from age 16 to age 18, requiring students to either obtain a high school graduation credential or remain in school until age 18. The purpose of this study is to determine if the SB18(2007) policy change was successful by comparing measurable outcomes with the intentions of stakeholders who worked to enact this change. As a frame of reference, it is important to understand the context under which compulsory schooling has been legislated in the United States.

Global Context: History of Compulsory Education in the United States

Education has been the backbone of our nation since its inception. In the first revision to our country's first state constitution, mere weeks after the end of the Revolutionary War, the New Hampshire Provincial Congress (1783) included a statement of belief in the importance of education for all citizens:

Knowledge and learning, generally diffused through a community, being essential to the preservation of a free government; and spreading the opportunities and advantages of education through the various parts of the country, being highly conducive to promote this end; it shall be the duty of the legislators and magistrates, in all future periods of this government, to cherish the interest of literature and the sciences, and all seminaries and public schools. (art. 83)

This sentiment was embraced by the founders of our federal government as well. Indeed, before the United States Constitution was written, Thomas Jefferson (1787) wrote to James Madison "Above all things I hope the education of the common people will be attended to, convinced that on their good sense we may rely with the most security for the preservation of a due degree of liberty." And more than thirty years later, Madison (1822) still shared that view which he imparted in correspondence: "Learned Institutions ought to be favorite objects with every free people. They throw that light over the public mind which is the best security against crafty & dangerous encroachments on the public liberty."

About this time states began to institute systems of compulsory education in which local governments were compelled to *provide* free public education. The timing and length of school availability varied, and attendance was voluntary until the 1840s when Horace Mann brought back to Massachusetts the idea of compulsory *attendance* from a trip to Prussia, where it had been adopted in 1812 (Woltz, 1955; Zhang, 2004). Mann "presented an economic justification for greater investment in schooling, but his arguments were soon picked up as justification for compulsory school attendance. Schooling makes workers punctual, industrious, frugal, and too rational to cause trouble for their employers" (Tyack, 1976, p. 378).

Thus, the first compulsory school attendance law was passed in Massachusetts in 1852, and by 1918 all of the states had such laws, which differed by age and length of required attendance (Landes & Solmon, 1972). Public school compulsion laws contained a variety of exemptions which included distance between home and school, choice of private or home education, proven literacy, and paid occupation (Faiella, 2006).

Moreover, the fact that these laws were not fully enforced, due to a limited supply of resources and the excessive cost of enforcement, created a condition in which some families opted out of enrollment or attendance (Landes & Solmon, 1972). In many cases, compulsory schooling laws and their effect on enrollment and attendance reflected the reality that children's labor was needed to contribute to family income (Woltz, 1955).

Although states with school laws had both higher enrollment and attendance rates, research conducted by Landes and Solmon (1972) found that compulsory education laws were not the cause of higher schooling levels. Levels of schooling tended to already be greater in the first states to pass laws, and "these laws appear to have merely formalized what was already an observed fact; namely, that the vast majority of school age persons had already been obtaining a level of schooling equal to or greater than what was to be later specified by statute" (p. 78). Tyack (1976) observed that increases in attendance and literacy rates before 1890 happened without much state pressure. Surveys of the era revealed that superintendents were often unaware of state school compulsion laws, some schools did not have enough space for children who wanted to attend, and educators did not want the unwilling students that enforcement would provide; additionally, many people initially viewed compulsion as a violation of parental rights (Tyack, 1976). But since schooling was already widely available, and most parents were already sending their children, the political cost of passing these laws was minimal in light of the apparent gains (Landes & Solmon, 1972). Goldin and Katz (2003) theorized that the expansion of legal compulsory schooling was not so much a design to increase student enrollment and attendance as a method for citizens to compel the government to provide more school resources.

However, Tyack (1976) noted that by the early 1900s the philosophy behind the expansion of compulsory schooling had shifted to reflect animosity against parents considered incompetent to teach their children; it became expected that children would be turned over to state schools for enculturation and assimilation under a common language, history, and belief system. A movement which had been started by citizens with a common interest seeking a service from the state had turned into a situation in which the state was supplanting the educational role of parents. This circumstance led to the 1925 United States Supreme Court ruling *Pierce v Society of Sisters* which upheld the parental right to direct the education of children, but also recognized the state's compelling interest in having educated citizens (Woltz, 1955).

While Margo and Finnegan (1996) concurred that compulsory schooling legislation alone did not have a statistically significant effect on school attendance, in the early 1900s there were significant positive impacts in states that combined compulsory schooling and child labor laws. Goldin and Katz (2003) also found a small but significant effect on high school attendance rates due to combined compulsory attendance and youth employment policies during the high school movement between 1910 and 1940, when an increasing number of states started requiring youth to attend secondary school, especially during the work shortages of the Great Depression (Faiella, 2006; Tyack, 1976). In 1935, during the height of the Depression, employment laws in many states quickly changed to restrict children from obtaining work permits until they had acquired a minimum age or level of schooling (Goldin & Katz, 2003). "Many of the laws were not pro-education, but were anti-truancy, anti-vagrancy laws designed to make certain that teens were either employed or at school" (p. 303). Youth who left school to

obtain work were more difficult to employ due to laws which required them to attend part-time alternative continuation schools during daytime hours; these policy changes had the effects of 1) making it more likely that employers would hire out-of-work adults, and 2) pushing teenagers to stay in school. Goldin and Katz (2003) also found that "changes in state laws can explain an increase in educational attainment of 0.145 years with 0.088 years coming from the adoption of continuation laws and 0.057 years coming from the strengthening of other child labor and compulsory schooling law requirements" (p. 301).

After World War II, the expectation that a student would complete secondary school became so great that non-completers came to be viewed as dropouts (Tyack, 1976). Well-paying, low-skilled factory and service jobs enabled the attainment of a middle-class lifestyle in spite of high school non-completion. Since the 1950s, however, the percentage of low-paying service sector jobs is unchanged from 25 percent of the employment market, and the proportion of factory jobs in the economy has fallen from 32 to 10 percent since 1960; at the same time, advances in technology and efficiencies in production methods have enabled businesses to increase productivity using a smaller number of highly-skilled laborers who require more education (Carnevale, et al., 2009; Luppino M., 2011).

Carnevale, Strohl, and Smith (2009) reported that "the United States creates and destroys jobs faster than any other economy in the world" (p. 27) with the result of continually increasing levels of skill and specialization required by the labor market. This is mitigated by Luppino's (2011) determination that from 1972 to 1992 the share of "working age adults with less than a high school education declined enormously from 42 to 16 percent" (p. 3). Yet Deye (2011) refuted those figures with research revealing

that graduation rates have remained unchanged since the 1970s; whereas previous estimates placed the four-year high school completion rate around 85 percent, with a corresponding dropout rate of 15 percent, Deye's findings put the dropout rate closer to 25 percent. "Between 1973 and 2008, the share of jobs in the U.S. economy that required postsecondary education increased from 28 percent to 59 percent" (p. 4), a number which Deye (2011) predicted would increase to 63 percent by 2020. And earning less at each level of educational attainment, women and minorities have consistently needed more education to make the same wages as white males (Carnevale, et al., 2009).

The inflationary trend of education requirements which touches nearly every occupation, combined with the persistent dropout situation, did not go unnoticed by researchers and policymakers during this time. In 1963, President Kennedy launched a nationwide campaign to draw attention to the dropout problem, noting that 40 percent of fifth-graders at that time would not complete high school (Kiener, 2014). Congress followed up in 1965 with the Elementary and Secondary Education Act to improve educational quality, particularly for poor and minority students, and increase the likelihood of high school graduation. In 1967, the newly appointed federal Commissioner of Education discovered that his office had been charged one hundred years prior with reporting annually on the progress of US students, a task which had never been completed. Awareness of the dropout issue, and compliance with the education monitoring mandate, led to research which uncovered a whole host of negative economic and social afflictions related to lower levels of educational attainment which will be further discussed in a review of literature.

Local Context: Compulsory Education in New Hampshire

New Hampshire is a small state in Northern New England with a stable population of approximately 1.3 million and a population density which is geographically divided between the more wealthy, urban, southern half of the state, and the more sparsely-populated, rural, northern region (US Census Bureau, 2020). The demographic makeup of NH is 92 percent Caucasian, and with a poverty rate of less than seven percent it is the eighth wealthiest state in the United States (US Census Bureau, 2022).

However, a higher-than-average cost of living combined with a low minimum wage, and lack of affordable housing and public transportation throughout most of the state, has led to a drain of young people out-of-state as an increasing number of middle-income families have found it unaffordable (UNH Carsey School of Public Policy, 2022).

New Hampshire's agricultural and industrial manufacturing economy of the 1800s has been largely replaced since World War II by jobs in government services, health care, and professional services which require licenses and degrees necessitating advanced training and education, as well as a tourism economy made up of real estate purchases related to second-homes, and high levels of retail shopping due to the lack of a general sales tax (UNH Carsey School of Public Policy, 2022). The additional absence of a state income tax leaves New Hampshire without a broad-based tax structure.

Consequently, school expenditures are paid for out of property taxes (NH School Funding Fairness Project, 2022). The resulting disparity in educational opportunities between school districts, based on the ability and goodwill of property owners within each school administrative unit to bear the burden of paying for local schools, is compounded by the increased cost of special education which is more prevalent among

the impoverished communities which are less able to afford it (Tatter, 2019). Poverty within the community also affects, and is affected by, levels of educational attainment, particularly with regard to high school dropout (Alliance for Excellent Education et al., 2019, 2020, 2021; Oreopoulos, 2009). With local property values and federal education funding tied to school statuses and rankings, stakes are high for school districts which are held accountable for academic achievement and graduation rates of students (Hall & Morton, 2004). Poorly performing students bring down the test scores of schools, and poorly performing school districts bring down the state high school completion average.

It is within this context that the New Hampshire legislature has addressed compulsory school attendance and high school completion. Literacy expectations increased nationwide after World War II, and as the baby boomer generation reached high school in the 1950s the New Hampshire legislature mandated compulsory schooling until age 16 if high school was offered within a student's school district, or age 14 if no high school was available (Faiella, 2006). In the 1980s this exemption was removed, and all students were required to remain in school until age 16; at this time, the state legislature created a study committee tasked with collecting data on high school dropout numbers, reasons, and successful intervention programs.

The national graduation rate in 1990 was reported to be 71 percent, which should calculate to a corresponding 29 percent dropout rate (Kiener, 2014), however the National Center for Education Statistics had no data regarding high school dropouts and completers in New Hampshire over the course of the 1990s (US Department of Education, 2002). An attempt to make school attendance a condition of drivers licensing failed to pass in the New Hampshire legislature in 1990 (NH General Court, 1990a).

A second bill that year to increase the compulsory school attendance age from 16 to 18 also failed in the House, however this measure was eventually signed into law in 1994 with the caveat that students between ages 16 and 18 could leave high school with written parental consent (NH General Court, 1990b, 1994). The dropout and literacy study committee was eliminated in 1995, and replaced by a statutory group studying only literacy.

But by the early 2000s the focus turned once again to high school dropouts. At that time, the New Hampshire Department of Education reported that the aggregate dropout rate in New Hampshire was approximately 15 percent (Hall & Morton, 2004). However, in an independent study of New Hampshire dropout figures conducted by the New Hampshire Center for Public Policy, Hall and Morton (2004) found that many students who had dropped out were being incorrectly reported as transfer students by school districts; the state commissioner of education was forced to acknowledge that the cumulative high school dropout rate in June 2002 was actually closer to 25 percent.

A new short-term legislative committee to study dropout prevention was created in 2003, along with a dropout prevention and recovery program to be administered through the New Hampshire Department of Education, which set the goal of a statewide 85 percent high school graduation rate (NH General Court, 2003). House Bill 619 (2003) sought to secure government and corporate resources, provide support for college and career placement, provide instruction and mentoring, and create alternative schools and internship opportunities that would assist students in completing high school, but was given no state funding. A third bill in 2003 named the dropout rate as one of a number of indicators of an adequate education, and required school districts to report the data

necessary to calculate federally mandated “annual and cumulative dropout rates of high school pupils.” House Bill 139 (2003) also created a long-term oversight committee with responsibility to review school performance and accountability measures, issue annual reports, and propose legislation.

In 2006, the New Hampshire Department of Education reported an 11.8 percent cumulative high school dropout rate (NH Department of Education, 2007). At that time the state legislature failed to pass a bill which included language to eliminate the parental right to withdraw a student from compulsory schooling after age 16 (NH General Court, 2006). That measure was reintroduced as Senate Bill 18 in 2007 with sponsorship from a bipartisan coalition including ten of twenty-four state senators and three state representatives, as well as support from the governor and various institutions such as the NH Department of Labor, NH Department of Education, NH School Boards Association, NH Association of School Principals, National Education Association, and Workforce Opportunity Council (NH Senate Clerk, 2007). Senate Bill 18 (2007) was signed into law on June 26, 2007, to take effect July 1, 2009, effectively raising the compulsory school attendance age from 16 to 18 in New Hampshire (NH General Court, 2007).

Confounding the situation, a review of literature has revealed empirical evidence suggesting that this action may be counterintuitive as raising the CSAA has been correlated with *increasing dropout* and *decreasing completion* rates (Mackey & Duncan, 2013; Whitehurst & Whitfield, 2012). Students who are compelled to stay in school do not necessarily continue to attend, and many schools would rather count them truant than withdraw them as dropouts (National Education Association, 2010).

Even though this policy change in New Hampshire disallowed students under age 18 from dropping out of school, a pilot study I conducted in early 2015 found that not only did students continue to drop out, but there was a variance in the number of dropouts by grade level (Gall, 2015). The National Center for Education Statistics reported that, in the year before the New Hampshire legislature enacted SB 18(2007), the percentage of students who enrolled in grades 9 through 12 but then failed to either obtain a diploma or return the following year was 3.2 percent in New Hampshire, compared to 3.9 percent nationally (US Department of Education, 2009). According to data reported by the New Hampshire Department of Education (2015), noteworthy gains had been made in grade 12 completion since SB18(2007) was implemented in 2009; the dropout rate for public high school *seniors* was nearly zero by the end of the 2012-2013 school year, and the completion rate was essentially 100 percent (NH Department of Education, 2015). However, a discrepancy between low grade-12 dropouts and a higher number of grade-9 through 11 dropouts prompted the inquiry for the current study (Gall, 2015). A lack of follow-up research on the effectiveness of these policies in states which have enacted CSAA increases had been noted by researchers (Mackey & Duncan, 2013). And what reporting has been done has been misleading, with some comparisons based on the use of different formulas, sometimes choosing calculations to bolster political opinions, and other times using an incorrect implementation date for the policy change (Bosse, 2011; Bosse, 2012).

Advocacy and Ethics

I have been a volunteer education advocate in New Hampshire for more than 20 years, particularly with regard to alternative education strategies in the settings of home education and special education. When SB18(2007) first came before the legislature, there was concern in the New Hampshire home education community about how the dropout prevention policy change would affect home education programs. I testified about several concerns at public legislative hearings for SB18(2007), particularly with regard to the concern that school districts might use home education law to “push-out” problem students. While this demonstrates my long history of advocacy for public education in New Hampshire, it also suggests that I might bring bias to this project. Therefore, I designed this research study to mitigate possible bias, and hoped to identify what actually happened as a consequence of the SB18(2007) policy change: what have been the real outcomes of SB18(2007), and were they what legislators had envisioned at the time of its passage? Approaching these questions with an open mind provided a unique look at what the policy has done and what might be the best course of action for the future. There has been a long enough time since the passage of the bill that observable outcomes of the policy change should be apparent, and used policymakers’ own words as a basis to arrive at an impartial assessment of its consequences.

Compulsory education requires individuals to attend school within whatever parameters are set forth by state and federal governments. Consequently, it is the responsibility of the state to provide guidelines, rules, and other support structures which are advantageous to citizens who are required to follow those rules and policies. It is, therefore, also the responsibility of the state to assess their policies with truth and

transparency about efficacy and outcomes. This study provides evidence that will assist in understanding the impact of such policy and provide a perspective that is intended to advocate best practices and best possible outcomes for individuals required to adhere to the policy.

As an advocate researcher, I understand that I took a risk studying this policy that had the potential to demonstrate an assessment different from what the state of New Hampshire wants to see. However, part of being an advocate is standing up against a flaw in a system and making public moral arguments that might offend the status quo. It is my hope as I shift from researcher into a public advocate role, that my study provides the best possible data to back up conclusions and recommendations. Thus, I have embraced an ethic of care, an ethic of critique, and ultimately, an ethic of justice. An ethic of care is best articulated by Nel Noddings (1984) who defined care as a relation, a connection, or an encounter with another person—it is an “I must” response to the plight of the other (p. 15). Attending to assessment of this policy was a “must response” in order to see if it did help the other, or hinder the other, or obscure the reality of how and when students drop out. The ethic of critique is not at all intended to disrupt what is working. Any time there is a blanket policy initiative, there should also be a way to assess how it works, or if it addresses the intended problem. An ethic of critique is our obligation to the other, and according to Tobin Siebers (1988) there is a rich history of it. Any time there is a global rule, law, or policy enacted upon others, it is our duty to assess how it impacts others, society, systems, and structures. Finally, an ethic of justice, or morality of justice, was addressed by Carol Gilligan (1982), who also advocated an ethic of care, which deals with moral decision making and the rights of others. Similar to John Rawl’s social

contract, it considers how decisions impact people and it seeks to minimize negative impacts to larger numbers of people. This integrates qualities of care and utilitarianism under the theory of justice.

The ethical evaluator pursues knowledge and understanding through competent systematic data collection and analysis, and honest reporting. I endeavored to produce a valid report within a pragmatic program evaluation framework as a detached neutral observer and gatherer of objective facts. Ethical issues of integrity, respect for people, and responsibility for public welfare require program evaluators to provide full disclosure of research purposes, uphold participant confidentiality, and mitigate potential biases. I have completed necessary CITI and NIH training as required when conducting research involving human subjects, and permission was obtained from the Plymouth State University Institutional Review Board before the research was conducted.

Due to the lifelong impacts to students and long-term impacts to society, social justice required an assessment of how this policy change impacted NH high school dropout rates. My advocacy plan is to provide the NH Department of Education with my findings that will give them insight into the policy and its efficacy. Individual school leaders should also be aware of this study so they have specific data and understanding of what is working and what is not working and can address their dropout prevention practices accordingly.

Focused Problem of Practice

In short, my focused problem of practice was to study high school dropout rates in New Hampshire with regard to SB18(2007) and determine if current school practices align with policymakers' intentions. I analyzed the policy change in New Hampshire which was enacted in 2007 when the NH legislature passed Senate Bill 18 to address high school dropout within the state by effectively raising the compulsory school attendance age (CSAA) from 16, requiring students to either obtain a high school graduation credential or remain in school until age 18. The purpose of this study was to determine if the SB18(2007) policy change was successful, by comparing measurable outcomes with the intentions of stakeholders who worked to enact this change. These findings may be useful to other states which have not enacted a similar policy but who have high dropout numbers. Since we know that education directly relates to economic growth and success, leadership potential, and the opportunity to reach one's fuller potential, it benefits the people of New Hampshire, and the United States in general, to have a policy that supports individuals and provides them with the highest level of support for attending and completing at least a high school level of education. Ensuring optimum success for public education will also enable equitable and balanced levels of opportunity for all people, regardless of race, class, and gender.

Research Questions

This study was conducted in multiple parts by investigating the following questions:

1. What program changes did NH policy makers intend to make with SB18(2007)?
2. How did dropout and completion rates of New Hampshire public high school students differ before and after the SB18(2007) policy change?
3. How are the practices employed by schools with students at risk of dropping out aligned with SB18(2007)?
4. Were there any unplanned consequences related to this policy change?

These questions presented an inquiry into the SB18(2007) policy change and its outcomes for the purpose of informing policymakers regarding the efficacy of the change, with the goal of providing verification of its success and/or recommendations for future program improvements, which are the hallmarks of a pragmatic policy evaluation (Fischer, 1999; Mertens, 2012; Patton, 2002; Stufflebeam, 2007; Trochim, 1998; Weiss, 1998). The purpose of this study was to analyze the efficacy of the change in New Hampshire compulsory school attendance policy in order to inform state and local policy makers about the real outcomes of such a policy, and to provide empirical evidence that can be used to make informed policy decisions in the future.

Chapter 2: A Review of Knowledge

The purpose of this chapter is to build a theoretical framework to assist with understanding what is happening in the current situation of my problem of practice. The review of knowledge provides basis and support for this study. Included in this chapter are both theoretical and empirical studies that will help to lay out the need for understanding policy implications. To restate the problem of practice, I examined New Hampshire's school dropout numbers and assessed how a recent state wide policy change, SB18(2007), has impacted these dropout numbers. The problem was that there was some early indication that the policy might not be effective in reducing NH dropout numbers but there had not been an assessment of the policy.

Empirical Analysis

The following empirical studies help to shape the importance of high school completion. These studies focus on identifying the economic, health and wellness, law and order, and racial inequity consequences of dropping out of high school. This section also looks at the reasons why people drop out of school.

Economic Consequences

In their research on high school dropout trends from 1972 to 2009, Chapman, Laird, and Ifill (2011) discovered that, when compared with citizens who receive a high school graduation credential or equivalency, dropouts earn significantly less over the course of their lifetimes and are subjected to higher rates of unemployment. For example, 2016 median annual earnings for a full-time worker over age 25 in the United States were nearly \$10,000 per year lower for secondary school dropouts compared to workers with only a high school diploma (US Department of Labor, 2017). This income disparity adds

up: lifetime earnings for workers with only a diploma were nearly \$400,000 more than for those who had dropped out of school (US Department of Labor, 2017). Nationwide, dropouts from a single high school class account for total lost income of \$154 billion over the course of their lifetimes (Alliance for Excellent Education, 2011). Dropping out affects employment too: for example, the unemployment rates for 2016 were 5.2 percent for workers with only a high school diploma, compared to 7.4 percent for workers who had not completed school (US Department of Labor, 2017).

Not only is dropping out costly, but outcomes appear to worsen the earlier dropout occurs. A study of compulsory schooling in the United States, Canada, and the United Kingdom conducted by Oreopoulos (2007) estimated that youth who stay in high school for an extra year earn 10 to 14 percent more than dropouts who do not. Moreover, requiring teens to stay in school an additional year over age sixteen decreases the probability of unemployment by 2.2 to 3.6 percent (Oreopoulos, 2009).

Completing high school reduces the chance that an individual will live in poverty and collect welfare. Oreopoulos reported that “remaining in school one year longer reduces the likelihood of falling below the US poverty line by 6% points” (2007, p. 2222). Waldfogel, Garfinkel, and Kelly (2005) calculated that the social welfare programs Temporary Assistance to Needy Families (TANF), food stamps, and housing assistance could save a combined total between \$8 and \$10 billion annually if all of the single-mother dropouts in the United States obtained a high school diploma. For instance, of single mothers receiving TANF in 2002 only one percent had post-secondary schooling, compared to 17 percent with only a high school diploma, and 27 percent who had dropped out; of single mothers receiving food stamps 18 percent had post-secondary

education, compared to 31 percent with only a high school diploma, and 38 percent who had dropped out of school; and of those single mothers who received housing assistance, 15 percent had attended post-secondary school, while 24 percent had graduated high school, and 26.5 percent had not finished high school (Waldfogel, et al., 2005).

Increased economic prosperity and reduced dependence on welfare housing programs allow families to move into better neighborhoods, which in turn affect their children's levels of social capital, including educational attainment. Wolfe and Haveman reported that "living in a community in which the young adults have more education increases the probability that the children living in the community will complete secondary schooling" (2002, p. 99). Furthermore, they found that levels of education are positively correlated with the amount of time and money individuals devote to charity.

Health and Wellness Consequences

Dropouts also suffer to a greater extent from health conditions and are more likely to be institutionalized in mental health facilities. Wolfe (2002) reported that "the relationship between more schooling and better health is not due to unobserved or unmeasured factors but instead is causal" (p.111). A 2002 study by Lleras-Muney confirmed the finding that education level appears to have a larger causal effect on mortality than was previously thought, and increases in the level of compulsory education do affect life expectancy; in 1960, a one-year increase in the education of dropouts amounted to a decrease in mortality rate within the next decade by 1.2 percent and "increased life expectancy at age 35 by as much as 1.7 years" (p. 24). Oreopoulos (2007) found similar results with an additional year of education decreasing a high school dropout's 10-year mortality by 1.3 to 3.6 percent.

In a 2002 meta-analysis, Wolfe and Haveman (2002) compiled a list of direct benefits correlated to an extra year of high school which included a reduction in cigarette smoking, decreased chance of being a heavy drinker, increased levels of exercise, and positive effects on the health of a marriage partner. They also documented indirect benefits such as lower medical expenditures, increased productivity and higher earnings due to less missed time at work, diminished pain and suffering, and decreased spread of communicable disease. Furthermore, in analyzing 25 years' worth of longitudinal data, Oreopoulos (2007) found that an extra year of compulsory schooling was associated with a 2.4 to 5.2 percent higher chance of life satisfaction among survey respondents.

Mothers of all ages with higher levels of schooling have children with improved health outcomes in terms of higher birth weights, lower rates of infant mortality, and increased percentage of childhood vaccination (Wolfe B. H., 2002). Research conducted in the United States and Norway by Black, Devereux, and Savanes (2008) focused on teen pregnancy, which is associated with a multitude of complicated health risks for both mother and child, revealed "evidence that increased compulsory schooling does in fact reduce the incidence of teenage childbearing" (p. 1025), with effects lasting at least two years beyond the minimum dropout age set by law. Moreover, effects of staying in school are carried over into future generations. Children, and even grandchildren, of individuals with higher levels of schooling are found to have higher levels of cognitive development and future earnings prospects, and a greater chance of graduating high school themselves, than those with less education (Wolfe, 2002).

Law and Order Consequences

It is not only health and welfare that are affected, but crime as well. According to Bell, Costa, and Machin (2015), “in the United States, 41% of inmates in prisons and jails in 1997 had not completed high school, compared to only 18% of the general population” (p. 1). And the negative effects of dropping out on crime rates disproportionately affect minorities; for instance, compared to 4.7 percent of white dropouts, an astounding 17.7 percent of black citizens who failed to complete high school are in prison (Bell, et al., 2015).

While compulsory attendance laws have not appeared to affect school attendance, there has been a robust correlation between these laws and crime rates as measured by arrest and incarceration numbers. Bell, Costa, and Machin (2015) reported that an increase in compulsory schooling age from 16 to 17 reduces the arrest rate for property crimes by 12.6 percent, and Anderson (2014) reported that property, violent, and drug crime arrest rates of 16 to 18 year-olds drop by nearly 17 percent when the minimum dropout age is set at 18. Furthermore, Anderson estimated that approximately \$190 million could be saved annually just on the value of lost property if all states were to set a compulsory schooling age of 18.

The mechanism whereby education reduces crime is called the incapacitation effect. Youth who are forced by compulsory school attendance laws to spend their days in school are not out on the streets unsupervised and committing crimes (Anderson, 2014; Bell, et al., 2015; Gilpin & Pennig, 2015). In their research, Bell, Costa, and Machin (2015) discovered direct evidence of incapacitation on crime rates, with effects persisting into adulthood, which they suggest is a result of preventing the initiation of criminal behaviors; youth who never start a life of crime may continue on the straight and narrow.

Not only does compulsory schooling affect incarceration rates, but an inverse relationship has also been identified: Incarceration of teens is linked to both lower education levels and lower future earnings (Hjalmarsson, 2008). In his study of the relationship between juvenile justice and high school completion, Hjalmarsson concluded that “arrested and incarcerated individuals are about 11 and 26 percentage points, respectively, less likely to graduate from high school than non-arrested individuals” (p. 613). Gilpin and Pennig (2015) posited that in addition to reducing crime rates, “incapacitating youth to schools ... may further increase graduation rates” (p. 13).

However, such a strategy is not without its own costs. Gilpin and Pennig’s (2015) research also revealed that, particularly in urban areas, states which increase the minimum dropout age to 17 and 18 experience more in-school drug and violent crimes than states with a lower dropout age. Mackey and Duncan (2013) found such an increase in school crime in 80 percent of states that have made this policy change, including threats, attacks with weapons, and drug incidents, along with an increase in suspensions. Although literature implies that increasing the compulsory schooling age to 18 reduces juvenile crime by 13.4 percent, high schools in states that incorporate this change sustain a 21.4 percent increase in overall crime (Gilpin & Pennig, 2015). Displacement of crime from streets to schools has resulted in increased absences among female and younger students due to fear and victimization (Anderson, 2014; Mackey & Duncan, 2013). According to Green and Navarro-Paniagua (2012), teacher absenteeism following an increase in compulsory schooling above age 16 also increases by 15 to 50 percent due to a more stressful school environment, which ultimately affects long term quality of education for all students.

Racial Inequity Consequences

The dropout problem is ultimately an issue of racial and economic equity; researchers have determined that high school non-completion is strongly related to socioeconomic factors such as poverty and race. Oreopoulos (2009) found in the 1960 census that 55 percent of dropouts younger than 20 years old from were from households with income below the 25th percentile, a number that has since increased to 73 percent. In the first year of this century “high school students living in low-income families dropped out of school at six times the rate of their peers from high-income families” (p. 85). The generational spiral of improved educational opportunities leading to economic prosperity and even higher levels of educational attainment was purposely withheld from people of color until the 1954 Brown v. Board of Education decision required desegregation of public schools. As a result, Bell, Costa, and Machin (2015) reported that black Americans now have an average of about one year less formal education than white Americans, and are almost twice as likely to drop out of high school.

Reasons for Dropping Out: Pushing, Pulling, and Falling Out of School

Reasons students give for dropping out of high school are classified into push and pull factors (Jordan, 1994). *Pull factors* which include family responsibilities and immediate job opportunities more frequently affect older students (Doll, et al., 2013). When the unemployment rate is low, students may be more likely to leave school because of a higher probability of finding a job, as opposed to forgoing present earning potential to stay in school (Stearns & Glennie, 2006). Older students are also more likely to be caring for family members, including their own children (Doll, et al., 2013).

Push factors, such as school behavioral policies and conflicts with teachers and other students, are more likely to influence younger students (Doll, et al., 2013). In a meta-analysis of reasons students gave for dropping out, Doll, Eslami, and Walters (2013) noted that pull factors which seemed to be the largest contributor to dropping out in the past have shifted over time so that push out factors now appear to be more prevalent.

A third category of dropout factors, those which cause a student to *fall out*, gains relevance when student engagement with school declines to the point that their low level of academic achievement will not allow them to graduate (Watt & Roessignh, 1994). There is a substantial amount of research evidence that “high school exit exams are associated with higher dropout rates, especially for students in lower income quartiles or who are already at risk because of nonacademic factors” (Freeman & Simonsen, 2015, p. 238). Although academic performance appears to be a bigger problem as students age, disengagement begins much earlier (Doll, et al., 2013; Stearns & Glennie, 2006).

Indeed, every subcategory of students has its highest dropout rate in ninth grade (Cohen & Smerdon, 2009; Stearns & Glennie, 2006). In a five-year study of Philadelphia dropouts, Neild and Balfanz (2006) found that “the probability of dropout was largest in Grade 9, with 45% of the ninth graders in their study dropping out of school, and the likelihood of dropout decreasing as students moved through the high school grades” (Kieffer, et al., 2014, p. 551). The growing number of enrolled freshmen over the past 30 years can be tied to a large number of students who do not obtain enough credits in ninth grade to be promoted to tenth grade the following fall, resulting in an enrollment bulge (Hall, 2004; Johnson, 2014). When these students drop out in large numbers it results in a subsequent tenth-grade dip.

Even among those who drop out later, grade nine is a critical turning point for students in determining the likelihood of future high school non-completion (Kieffer, et al., 2014). By the time they enter high school, approximately half of freshmen students are chronically disengaged from school (Klem & Connell, 2004). For many students, the transition to high school is associated with academic and social stress which results in lower achievement and school attendance, and ultimately leads to drop out (Akos & Galassi, 2004; Mizelle & Irvin, 2000; Alspaugh, 1999).

Stakeholder and Organization Perspectives: Modern Measures, Mixed Results

The fact remains that many students are not completing high school, with high costs to themselves and larger society. In 1997, the former presidents of the United States held a summit to discuss challenges and improvements to the national education system. One lasting result of the summit was the establishment of the America's Promise Alliance, a partnership of nonprofit organizations dedicated to improving the lives of youth (Kiener, 2014). The challenge to see all youth graduate with a high school diploma was taken up for more than 20 years by successive presidents, with President Obama calling it imperative for states to raise the compulsory school attendance age (Whitehurst, 2012), a move which was also supported by the National Conference of State Legislatures, National Association of Secondary School Principals, National Governors Association, and National Education Association (Mackey, 2013; National Education Association, 2010). This resolution has subsequently become one of the most widely used policy strategies to reduce dropout (Landis, 2011; National Education Association, 2010; Oreopoulos, 2009). Twenty states plus the District of Columbia had already increased their compulsory schooling age by 2010 (Gilpin, 2015; National Education Association,

2010). States that are more likely to raise the dropout age are ones with a demographic makeup that includes higher poverty rates, a working age population with a large proportion of high school graduates, and a population increasingly over the age of 25 (Luppino, 2011).

The primary argument of proponents has been that compulsory schooling laws are outdated and need to be updated in light of the growing wage gap between dropouts and adults with more education in the new global information and technology economy (Landis, 2011; Rennie Center for Education Research and Policy, 2009). The rhetoric behind this trend is that higher compulsory attendance ages encourage students to stay in school, keep youth from “making a mistake”, reduce the ability of schools to engage in push out practices, and send a message to the public about the importance of education (Bridgeland 2007; Broder, 2006; Mackey, 2013; Rennie Center for Education Research and Policy, 2009). A qualitative study sponsored by the Gates Foundation and conducted by Bridgeland, Dilulio Jr., and Streeter (2007) offered testimony by former dropouts who believed they had made a mistake in dropping out and would choose to stay in school if they could do it over again; on that basis, this highly publicized report concluded that states should raise the compulsory school attendance age to 18. Even if stricter laws impact only a small number of students, in the long run there is an overall benefit to society when individuals complete high school (Oreopoulos, 2006; White, 2012).

Although it makes logical sense that requiring youth to stay in school should lead to lower dropout and higher completion rates, research points to mixed results. A comparison between the 10 states with the highest graduation rates and the 14 states with the lowest dropout rates showed no correlation between those indicators and

compulsory school attendance age (Rennie Center for Education Research and Policy, 2009). Angrist and Krueger (1991) also noted that only a quarter of potential dropouts remain in school due to compulsory schooling laws. In an analysis of a 50-year trend to raise schooling requirements throughout the states, Bell, Costa, and Machin (2015) found no consistent pattern between compulsory schooling and educational attainment.

Moreover, harsher schooling laws sometimes have a negative effect on education levels (Bell, 2015; Schargel, 2014; MD Department of Education, 2013). Indeed, Schargel (2014) noted that

some states that require students to stay in school until age 18 have some of the nation's highest graduation rates (such as Nebraska and Wisconsin, both with 88 percent graduating) and some of the lowest, such as New Mexico (70 percent) and the District of Columbia (59 percent). (p. 521)

The Maryland Department of Education (2013) found similar results in an analysis of 14 states which had raised their compulsory attendance age to 17 or 18; while most of the states saw an increase in averaged freshman graduation rates, two realized a decline, and one remained constant. A national study conducted by Whitehurst and Whitfield (2012) found that "with or without demographic controls, states that require students to attend school until they are 18 years of age have graduation rates that are one to two percentage points lower than states that only require attendance until age 16 or 17" (p. 2).

Furthermore, strengthening the law does not appear to significantly increase school attainment on an individual level. Landis and Reschly (2011) reported that higher compulsory attendance ages did not greatly affect numbers of high school dropouts and completers, and only had a small association with the timing of dropouts. In fact, Bell,

Costa, and Machin (2015) reported “*at most* a 0.143 increase in years of schooling from a one-year increase in the law” (p. 17). Likewise, using Oreopoulos’s 2007 findings Mackey and Duncan (2013) calculated that a one-year increase in compulsory schooling age is only associated with a 26-day increase in the amount of time the average dropout stays in school. Empirically, “there are no *substantial* differences in the dropout rate or attainment rate across states with different leaving ages ... on average, raising the school leaving age above sixteen increases an individual’s years of schooling by 0.13 years” (Oreopoulos, 2009, p. 94). In actuality, even after raising the compulsory school attendance age, the same students who would have dropped out still fail to attend school, but instead of being counted as dropouts they are considered to be truant (National Education Association, 2010).

Because students have been leaving school even when they are compelled by law to continue, it is apparent that laws have been poorly enforced with little punishment for noncompliance. Burkhauser (2002) reported that changing school-age policies did not result in significant changes in dropout or completion, but did lead to large increases in truancy. Unfortunately, enforcement of truancy laws does not seem to help. Zhang (2004) investigated the effect on truancy rates of increased prosecution for noncompliance, and found that the "relationship between prosecution and truancy rates is simply no relationship: more prosecution does not reduce or, indeed, increase truancy rates at all" (p. 32).

To complicate matters more, Luppino (2011) found significant negative costs to student achievement related to increasing the dropout age above 16; "these laws have negative impacts on the educational outcomes of weaker students who were not on the

verge of dropping out" (p. 16). While stricter compulsory schooling laws increased the probability that students in the top percentiles of their high school class would take honors classes, they also decreased the chances that students at the bottom of the class would do so. Additionally, Luppino (2011) calculated that such a policy change was found to decrease combined SAT scores by 56 points overall, and by 84 points for bottom-ranked students, besides appearing to discourage black students from taking college entrance exams at all.

There is also concern that, in places where increased school attendance ages have been correlated with more students graduating, the quality of a diploma has declined (Kiener, 2014). Landis and Reschly (2011) have pointed out that "preventing dropout and promoting school completion are not the same goal" (p. 721); staying in school is not the same as reaching completion or competence. In their desperation to improve dropout rates, some states have seemingly relaxed graduation requirements (Kiener, 2014). Some of the pushback against Common Core standards may be due to a belief that a more rigorous curriculum causes more students to drop out (Kiener, 2014). And while Glennie, Bonneau, Vandellen, and Dodge (1970) reported a small amount of evidence that improvements in academic achievement can lead to decreased dropouts, they reported an even larger amount of evidence that increasing school dropout rates lead to increases in school performance in subsequent years; test scores improve when low-performers leave school. In districts trying to improve school achievement ratings this finding could be strong motivation for pushing out students with poor academic success.

Grad Nation

In spite of the lack of supporting evidence, many governors got on board with increasing their state's CSAA because they wanted to be perceived as doing something about the dropout problem (Bridgeland, 2007). The National Governor's Association established a Graduation Rate Compact whereby all 50 states agreed to use a common calculation for on-time high school graduation rates (Alliance for Excellent Education et al., 2010). This formula was adopted by the United States Department of Education in 2008 in order to more accurately gauge the number of dropouts, and for use in comparing dropout rates between states. By 2010, when the America's Promise Alliance launched the Grad Nation initiative for dropout prevention, 33 states were actively using the new definition (Kiener, 2014). Since that time, Grad Nation has released an annual report on the status of high school completion initiatives across the country, including updated recommendations for annual improvements to accomplish a goal of reaching a nationwide 90 percent on-time graduation rate by the year 2020 (Alliance for Excellent Education et al., 2010).

Despite the purported intention of the Grad Nation initiative to use only evidence-based practices, one of the ten initial program benchmarks was for all states to increase compulsory school attendance age to 18 even though 12 states had recently increased CSAA with mixed results – only two states had reported increased rates of high school graduation, and one reported an increase in dropouts (Alliance for Excellent Education et al., 2010). Moreover, of the ten states with *lower* graduation rates in 2009 than 2002, six of them already had a compulsory attendance age of 18; meanwhile 16 states with a compulsory attendance age of 16 made progress on improving their graduation figures

during that same period - yet Grad Nation continued to advocate for policies through 2015 which included harsh penalties for underage dropouts. The 2016 Grad Nation Update dropped the recommendation to raise state compulsory attendance ages (Alliance for Excellent Education et al., 2016). At that time, it seemed that 20 states - nine of which still had a compulsory attendance age under 18 - were set to reach the 90 percent graduation rate goal, however the same report predicted that the goal of reaching a 90 percent national graduation rate by 2020 was not going to be realized.

Questions about the validity of rising graduation rates, as well as concerns about high school graduate outcomes in college and career entry, led to new recommendations to begin tracking and including five- and six-year high school graduates in the completion figures by reporting extended-year graduation rates along with the original Adjusted Cohort Graduation Rate (Alliance for Excellent Education et al., 2016). Continued ambiguity in data collection and reporting by some states resulted in a lack of clarity and accuracy in dropout statistics, and the 2008 graduation definition left room for states to inappropriately remove from their figures students at risk of dropping out. Other concerns included diplomas awarded to students who did not meet graduation requirements, creation of alternative diplomas with varying levels of rigor, and schools pushing students out to home, charter, virtual schools and other alternative programs which accounted for approximately fifty percent of schools with low graduation rates, particularly credit or dropout recovery and adult education where dropout numbers are not tracked. Increased standardized test scores among a larger number of participants disproved the allegation of lowered graduation standards; nevertheless, approximately

seventeen percent of high school graduates were found to be unprepared for college level courses (Alliance for Excellent Education et al., 2017).

As 2020 came and went, it became apparent that the biggest challenge to reducing dropout is poverty; while most states improved their graduation rates during the first ten years of the Grad Nation initiative, socioeconomic inequity within the student population has remained a sticking point which seems out of reach of state and local education agencies, with homeless students experiencing the lowest graduation rates in the country (Alliance for Excellent Education et al., 2019, 2020, 2021). Needless to say, the pandemic did not help matters, and Grad Nation recommendations to improve graduation rates have shifted away from increasing compulsory school attendance ages in states which have not already done so, to instead focus on bolstering public resources for those students in underserved communities.

Best Practices in Dropout Prevention

Even before Grad Nation (2016) dropped its recommendation to increase state compulsory school attendance ages, Landis and Reschly (2011) had concluded that raising the compulsory schooling age does not address reasons for dropout or provide support for successful completion of high school. “In order to have the intended effect, supplementary programs are necessary” (White, 2012, p. 7). In a 2010 policy briefing, the National Education Association asserted their lobbying position to push mandatory compulsory attendance for all non-completers under age 21, but only as “part of a more comprehensive plan” (p. 2).

“Policymakers and administrators often grapple with finding ways to reduce the number of dropouts. Some consider lowering class size, others consider making the

curriculum easier, or targeting students at risk earlier” (Oreopoulos, 2009, p. 85).

In addition to reviewing state and local education policies for potential push out incentives, Deye (2011) recommended a similar list of strategies to address the dropout problem, which include high expectations for all students, incorporation of college and career readiness standards into graduation requirements, and provision of a variety of flexible avenues to graduation which are engaging and relevant to students’ futures after high school - such as career and technical education programs, college credit opportunities, online courses, credit recovery, and after school and summer learning programs. She also recommended that schools make an effort to develop relationships with students to personalize learning; and work closely with parents to identify attendance, behavior, and academic issues for targeting early interventions before these dynamics become overwhelming.

Indeed, more than 30 years of research by the National Dropout Prevention Center has been distilled down to a comprehensive list of the most effective dropout prevention methods, which constitute a four-tiered approach of simultaneously addressing community, family, student-learner, and didactic facets of dropout (Smink, 2005). School and community perspectives include interagency collaboration with community organizations to address common concerns, systemic renewal efforts to continually improve the organizational structures of schools, and creation of safe learning environments where students feel protected physically and socio-emotionally (Smink, 2005). In a review of federal dropout prevention programs, Dynarski and Gleason (2002) observed that programs which only provide school supports do not address the community and family circumstances which have been proven to influence

the academic achievement of students. Consequently, they reported that systemic renewal efforts that focus on school restructuring to provide specific services to students are less effective than programs targeted toward improving classroom practices and curriculum through professional staff development. Freeman and Simonsen (2015) reported a similar result: “Among single-component interventions, the only effective components were academic interventions or school-level organizational components. The majority (79%) of effective studies were targeted at individual students or small groups, and 70% of studies targeted students in high school” (p. 240).

Instructional improvement through continual professional development gives teachers the support they need to work effectively with students who are at risk of dropping out. Programs of active learning, educational technology, individualized instruction, and career and technical education all meet the needs of different learners who may not otherwise be engaged in school (Smink, 2005). To be sure, the Organization for Economic Co-Operation and Development (OECD) produced "two thorough studies, which consisted of 33 countries including the US ... which deemed that individuals in countries with stronger vocational training programs find it easier to transition into the workforce than Americans” (White, 2012, p. 6).

Basic core strategies of mentoring and tutoring develop supportive relationships students need to feel connected to academics, service-learning projects connect students to their communities while also providing career and civic skills, and after-school and summer learning opportunities use a combination of these strategies, whereas alternative learning programs for youth who are not engaged by traditional public school programs can allow students a path to graduation that better meets their needs (Smink, 2005).

Landis and Reschly (2011) agreed that policymakers need to focus on engagement instead of age, while Oreopoulos (2006) suggested that it may be easier for students to stay in school and graduate if they were offered more curricular choice, and Bridgeland, Dilulio Jr., and Streeter (2007) favored the promotion of alternative learning programs. In fact, Dynarski and Gleason (2002) found that the programs which had the greatest impacts were those which helped students earn alternative graduation credentials and included some aspect of personalization; alternative schools and instructional settings which allowed students to work in small groups or with mentors and tutors were particularly successful compared to other dropout prevention programs.

Early intervention strategies address family engagement to encourage parent participation in the educational process, address access to quality early childhood education options - particularly for families in poverty, and support the early literacy that is critical for long term student success (Smink, 2005). Messacar and Oreopoulos (2012) also recommended engaging at-risk students in elementary grades, as well as encouraging state experimentation to raise school completion rates.

While Dynarski and Gleason (2002) reported a key finding consistent with their earlier research that most programs did not improve both dropout rates and educational outcomes, the National Dropout Prevention Center noted that local dropout prevention initiatives demonstrate greater efficacy when more strategies are employed in concert (Smink, 2005).

Theoretical Analysis

The primary goal of this study was to evaluate the New Hampshire SB18(2007) policy change in order to add to the literature and generate evidence and practical recommendations for policymakers regarding the ramifications of increasing compulsory school attendance age. According to Carol Weiss (1998), noted scholar of education policy analysis, “Evaluation is the systematic assessment of the operation and/or the outcomes of a program or policy, compared to a set of explicit or implicit standards, as a means of contributing to the improvement of the program or policy” (p. 4).

Trochim (1998) differentiated between the informal evaluation we do in everyday life, and program evaluation which applies methodical social science research techniques to provide useful evidence for decision making in public or political contexts.

A summative program evaluation is a retrospective assessment of a program’s effectiveness at the end of its service cycle(s), conducted so that stakeholders can decide whether it should be continued or changed, while an outcome evaluation examines the end results or consequences of an intervention, such as cross-year trends, the relative efficacy of program practices, or program shortfalls, to provide direction for policymakers (Fischer, 1999; Mertens, 2012; Patton, 2002; Stufflebeam, 2007; Weiss, 1998).

Stufflebeam and Shinkfield (2007) assert that program evaluation is a pragmatic endeavor. A pragmatic theoretical framework is one in which the purpose of research is to provide information that is useful for stakeholders (Mertens, 2012). Within a pragmatic paradigm, particularly in education and policy research, but also in program evaluation, the systematic and integrated use of a mix of quantitative and qualitative designs is often necessary, and even expected, as it is deemed important to match research practices with questions under examination (Boudah, 2011; Creswell, 2018; Fischer, 1999; Mertens, 2012; Patton, 2002; Stufflebeam, 2007; Tashakkori, 1998; Weiss, 1998). Quantitative research designs that aim to produce generalizable knowledge about the causes of an outcome require experimental treatments, random sampling, and data collection methods such as surveys that allow for statistical analyses; however, quasi-experimental time series designs which are employed “when a control group cannot be established, but the same measures can be applied to one group of people or things several times before and several times after the program’s implementation” also fall into this category (Fischer, 1999, p. 34). While it is not possible to provide a control group when examining the policy change within a state, as all students should be affected, comparison of student groups over a number of years before and after the change constitutes a quasi-experimental time series. In contrast to the controlled settings of quantitative research, systematic qualitative research designs are performed in naturalistic settings, often using purposeful sampling, to collect open-ended data through methods such as interviews and records reviews to provide real-world contextual knowledge that describes a phenomenon and gives meaning to superficial quantitative results (Boudah, 2011; Creswell, 2018; Fischer, 1999; Mertens, 2012; Patton, 2002; Stufflebeam, 2007; Weiss, 1998).

In program evaluation, mixed methods complement each other by looking at different facets of a program and providing a link between processes and outcomes, with qualitative methods illuminating program processes, and quantitative methods revealing program outcomes (Weiss, 1998). Patton (2002) also noted that

It is important to know the extent to which a program is effective after it is fully implemented, but to answer that question it is important to learn the extent to which the program was actually implemented ... Where outcomes are evaluated without knowledge of implementation, the results seldom provide a direction for action because the decision maker lacks information about what produced the observed outcomes (or lack of outcomes). (p. 160)

Limitations of mixed methods research designs include the extra time it takes to conduct a challenging combination of complex research procedures, and the possibility that findings are context dependent (Patton, 2002). However, the benefits of an integrated mixed methods inquiry outweigh the drawbacks given that they allow for verification of results through triangulation between different data sources within a method, and also between methods, thereby improving the quality, credibility, and interpretability of the study, and increasing confidence in research findings; any inconsistencies are viewed not as a failure of research, but as an opportunity for deeper insight into the phenomenon under study (Patton, 2002; Stufflebeam, 2007; Weiss, 1998). Qualitative and quantitative methods are “employed in combination to ensure depth, scope, and dependability of findings ... provide direction for improving programs ... and assess their effectiveness” (Stufflebeam, 2007, p. 188). Indeed, the American Evaluation Association (2016) has developed a plan for contextually and methodologically sound mixed methods education

evaluation which includes qualitative designs such as case studies, as well as quantitative survey and quasi-experimental designs.

Theory of change emerged from Peter Drucker's (1954) work in management by objectives that he outlined in his book, *The Practice of Management*. Ideally, theory of change does not just produce knowledge but it also identifies what methods are most effective toward reaching a particular goal and objective. A general assumption inherent in this theory is that there will always be change, so identifying and even anticipating what is most useful and effective is an essential component of any theorizing.

The theory of change developed from the process of program evaluation. As the framework for a program evaluation, a theory of change is a three part methodology in which the researcher (1) establishes a *program theory* of the underlying assumptions, desired outcomes, and program goals policymakers had intended when creating the policy change, 2) measures *program outcomes*, and 3) investigates the delivery of program services to ascertain an *implementation theory*, based on program theory expectations, in an attempt to explain the activities and processes that contributed to the observed outcomes (House, 2015; Patton, 2002; Stufflebeam, 2007; Weiss, 1998). The purpose of a theory of change in program evaluation is to discover whether program implementation followed each step of policymakers' plans, examine the efficacy of the policy change, and provide direction for improvement if necessary (Stufflebeam, 2007; Weiss, 1998). To this end, the United States Department of Education has published a brief which asserts that "all evaluations of education interventions should begin with a theory of change" (US Department of Education, 2019, p. 1). Benefits of using a theory of change include the ability to break the program down into pieces that are easier to

study, define a justifiable set of criteria against which to judge program activities, review assumptions in a variety of settings, and contribute to the generalizability of research results for similar programs (House, 2015; Weiss, 1998). A limitation of this methodology is the possibility of outside influences affecting outcomes by superseding program interventions; yet this limitation can be mitigated by theory triangulation, which compares results to theoretical frameworks developed as part of the change theory and can contribute to verification and validation of research findings (Patton, 2002).

Summary

This chapter identified a theoretical framework for this study focused around program evaluation and the theory of change. These two paradigms enabled the development of a strong mixed methods approach which will be discussed in chapter 3. Additionally, this chapter provided empirical evidence supporting the problem of practice, that it is an urgent problem with dire social and individual consequences. Finally, this chapter also considered the global and local organizational and stakeholder landscape that exists in the literature today. The review of the literature in this chapter supports the need for this study and assures the relevancy of my research questions.

Chapter 3: Methods and Design

This chapter describes the design and methods of an explanatory sequential mixed-methods study of high school dropout and completion in New Hampshire. Dropping out of high school has negative consequences for both society and the individual (Bridgeland, 2007; Chapman, 2011; Lehr, 2004; Messacar, 2012; Rennie Center, 2009). In 2007, the NH legislature enacted Senate Bill 18 (SB18(2007)) in order to create barriers to dropping out of high school by effectively raising the compulsory school attendance age (CSAA) to 18. To gain a better understanding of the effects of the SB18(2007) policy change, this research study explored the following questions:

1. What program changes did NH policy makers intend to make with SB18(2007)?
2. How did dropout and completion rates of New Hampshire public high school students differ before and after the SB18(2007) policy change?
3. How are the practices employed by schools with students at risk of dropping out aligned with SB18(2007)?
4. Were there any unplanned consequences related to this policy change?

Study Purpose and Design

The primary goal of this study was to evaluate the New Hampshire SB18(2007) policy change in order to add to the literature and generate evidence and practical recommendations for policymakers regarding the ramifications of increasing the high school compulsory attendance age. Given the intention of this researcher to examine the outcome of the policy change intervention SB18(2007) with regard to high school dropout and completion, which is the culmination of school year program cycles, a summative outcome program evaluation seemed the most fitting research design for this study, findings of which should be important to New Hampshire education

stakeholders in documenting the effectiveness of the existing program or providing a basis for making further changes. In order to evaluate the New Hampshire high school dropout policy change against the outcomes intended by its creators, the overarching theoretical framework was a theory of change, requiring a multi-phase process and employing a mixed methods design. The first phase of this study used qualitative records review to establish the program theory of SB18(2007). In the second phase, a quasi-experimental time series was used to compare pre-policy change trends with the observed outcome of changes in high school dropout and completion rates. In phase three, quantitative survey techniques were used to develop an implementation theory based on school district practices related to dropout prevention. The theory of change was concluded by comparing how implementation practices align with policymakers' intentions, while providing insight into how they both relate to the observed outcome.

Data Collection, Data Sources, and Participants

Because of the sequential nature of this mixed-methods research study, participants and data sources, data collection methods and specific practices, data analysis and interpretation varied from one phase to the next. I used both Microsoft Excel, as well as MaxQDA software which supports qualitative, quantitative, and mixed methods data analyses, transcription, coding, visualizations, and statistical tools in order to facilitate different types of sorting activities (MaxQDA, 2021).

Phase I

The first phase of this study employed as a data source existing public records detailing the legislative history of the SB18(2007) policy change in order to examine the research question: What program changes did NH policy makers intend to make with SB18(2007)? Historical documents available on the New Hampshire General Court website, as well as digitally archived public news media reports about SB18(2007), were downloaded and carefully sorted to glean those containing pertinent text, before being entered into qualitative data analysis software. These documents, compiled as the bill made its way through both the New Hampshire Senate and House, include text of the bill and amendments; committee, subcommittee, and public hearing meeting minutes; written testimony and speaker lists from public hearings; committee reports; and other referrals. News articles and press releases discussing the legislative policy change initiative were also examined for the purpose of identifying public information pertaining to policymaker intent.

These documents were analyzed to determine the legislative intent of the New Hampshire high school dropout policy SB18(2007) in order to establish a program theory to be used as a baseline for discernment-of and comparison-with an implementation theory developed in a subsequent a phase of the study. According to Strauss and Corbin (1998) there are three types of qualitative data coding used in textual content analysis: Open coding is “the analytic process through which concepts are identified and their properties and dimensions are discovered in data” (p. 101), axial coding is “the process of relating categories to their subcategories ... at the level of properties and dimensions” (p. 123), and selective coding is “the process of integrating and refining the theory”

(p. 143). All three of these treatments were applied to relevant documents in order to develop a program theory that represents policymakers' assumptions and intent for the SB18(2007) policy change. Coding categories were compared with those in the Phase III Fast Response Survey codebook (US Department of Education, 2010) and adjusted for maximum comparability and subsequent integration.

Internal and external homogeneity determine the extent to which categories hold together in a discrete fashion, while internal and external plausibility represent the degree to which categories are consistent and represent the entire theory using all of the existing data (Patton, 2002). Patton (2002) warns that threats to the credibility of this type of methodology "involve the making of the qualitative analyst's equivalent of Type I and Type II errors from statistics: The analyst may decide that something is not significant when in fact it is, or conversely, the analyst may attribute significance to something that is meaningless" (p. 467). This threat can be mitigated through the determination of substantive significance by addressing the strength of the evidence in support of the construct, its consistency in comparison with other knowledge, and its usefulness for some intended purpose, such as part of a theory of change (Patton, 2002). Cross case qualitative comparative analysis and analytic induction were applied across Senate, House, and media documents in order to validate and corroborate the program theory of change and reduce the potential risk of inserting bias (Patton, 2002).

Phase II

In order to explore the research question: How did dropout and completion rates of New Hampshire public high school students differ before and after the SB18(2007) policy change, the second phase of this study used as a data source existing reports available for public use on the NH Department of Education website. From 2001 until the present, New Hampshire school districts annually uploaded enrollment, dropout, and completion numbers to the NH Department of Education through the Initiative for School Empowerment and Excellence (i4see) data management system, where it was compiled into a large database and aggregated for reporting to the federal government.

The New Hampshire Department of Education used a three-step quality control process to ensure reliability and validity of the data. Once accuracy was verified, reports for those indicators as of October 1 were made available to the general public on their website. (NH Department of Education, 2007; NH Department of Education, 2015) It could be assumed that their instrument reliability and validity were even across data collection points.

The Department changed the way it reported student enrollment data in 2001, making it impossible to compare across years prior to that change. Consequently, this research study began its analysis with the 2001-2002 school year. In spite of potential complications in the delivery and data management of public education due to the Coronavirus pandemic beginning January 2019, this study analyzed and reported on data through the 2021-2022 school year just for curiosity's sake. The sample for this phase consisted of the entire population of students enrolled in grades 9 through 12 at New Hampshire public schools, public academies, public charter schools, and joint

maintenance agreements for the period between the school year beginning in 2001 through the school year ending in 2022. School-level and total-statewide high school fall enrollment, completion, and dropout data were downloaded into Microsoft Excel spreadsheets from annual reports provided by the New Hampshire Department of Education website. Data was sorted in Excel for graphical analysis.

Annual event dropout and completion rates were calculated as detailed below using reported fall enrollment figures. Fall enrollments are defined by the Department of Education as the number of students on October 1 of each school year who have enrolled since the start of the school year, as well as those who were enrolled the previous year and had not dropped out or graduated, were not deceased, and had not transferred to another school (NH Department of Education, 2007).

Completers. Completers are currently defined by the state of New Hampshire as students who have graduated from high school with a regular or nonstandard (special education) diploma, or an alternative graduate certificate such as the HiSET or GED (NH Department of Education, 2015). However, the United States Department of Education instituted a standardized reporting requirement beginning in 2010, using a cohort rate for the number of students graduating with a regular diploma within four years of entering grade nine (US Department of Education, 2011b), which excludes alternative graduation credentials and students who take more than four years to graduate. To further complicate matters, the state did not include alternative graduate credentials in the high school completion figures before 2008 (NH Department of Education, 2007).

In order to eliminate instrumentation validity error, to account for all high school students receiving a diploma regardless of timing, and to enable comparison across years

when definitions and reporting had changed, this study employed event completion rates. Annual event completion rates were calculated using total reported grade 12 enrollments plus special enrollments, and students who received both regular and nonstandard diplomas, by employing the formula in (3.1).

$$\text{Calculated Event Completion Rate} = \frac{\text{Calculated Regular + Nonstandard Diplomas}}{\text{Calculated Grade 12 + Nonstandard Enrollments}}$$

(3.1)

Dropouts. Until 2007, the NH Department of Education had been reporting event dropout rates which included all students who enrolled in school one year but did not either receive a diploma or return the following year. These figures were based on fall enrollments for students in grades 9 through 12, plus secondary school special enrollments, and did not include students who transferred, were suspended or expelled, incarcerated, truant, or deceased. In 2007 a new reporting system disaggregated three subcategories from the dropout tally, and a cohort rate was also added. In order to eliminate instrumentation validity error, and to facilitate comparison across years, this study re-combined subcategories to recreate the original event dropout metric for those years in which it is not reported as such. Therefore, dropouts were categorized in this study, according to the original definition, as those students who enrolled in high school but subsequently left without a receiving either a regular or alternative (special education) diploma. In order to compare across years, dropout figures included those students who

left school without a graduation credential and then received a graduate equivalency diploma (GED or HiSET) or enrolled in college. Annual event dropout rates were calculated using the formula in (3.2).

$$\text{Calculated Event Dropout Rate} = \frac{\text{Reported Early Exit Non-Graduates}}{\text{Reported Grade 9-12 Regular + Nonstandard Enrollments}}$$

(3.2)

In order to more fully understand the dropout phenomenon, a comparison was made between the dropout rates of students in grade 12 versus the group of grade 9 through 11 dropouts using calculations derived from dropout and completion reports using the formulas in (3.3) and (3.4), respectively.

$$\text{Calculated Grade 12 Noncompleters} = \text{Reported Regular Grade 12 Enrollments} - \text{Reported Regular Diplomas}$$

$$\text{Calculated Grade 12 Regular Event Dropout Rate} = \frac{\text{Calculated Grade 12 Noncompleters}}{\text{Reported Grade 12 Regular Enrollments}}$$

(3.3)

Calculated Grades 9-11 & Nonstandard Noncompleters	=	Reported Grades 9-12 & Nonstandard Noncompleters — Calculated Grade 12 Noncompleters
Calculated Grades 9-11 & Nonstandard Adjusted Enrollments	=	Reported Grades 9-11 & Nonstandard Enrollments — Reported Nonstandard Diplomas
Calculated Grades 9-11 & Nonstandard Event Dropout Rate	=	$\frac{\text{Calculated Grades 9-11 \& Nonstandard Noncompleters}}{\text{Calculated Grades 9-11 \& Nonstandard Adjusted Enrollments}}$

(3.4)

Rates were compiled into tables to create time series. The SB18(2007) policy change is the independent variable, and dependent categorical variables are the population of all NH high school dropouts and completers between the years 2000 and 2020. Graphical analyses were prepared, and theoretical patterns using expected forecast trendlines based on pre-policy change trends were compared to observed post-policy change patterns. Figures and tables were color-coded for easy comparison.

Phase III

The third phase of this study investigated the research question: What practices do schools use which could account for the outcome observed in Phase II of this study? To this end, a quantitative survey was conducted. Informed consent was obtained as part of the survey process.

All of the data used in phase three was collected, stored, and maintained digitally. Phase III raw data was stored in password protected folders on secure hard drives which were maintained in the researcher's home office. Any personally identifiable information will be destroyed three years after the research study has been completed.

In order to minimize sampling error and maximize data collection, surveys were distributed to the population of all New Hampshire public, academy, and charter high schools for completion by the person most knowledgeable about the school's dropout prevention services and programs. Students who are considered in danger of not meeting academic goals such as promotion or graduation are deemed to be at-risk of dropping out of school; At-Risk Coordinators work with students, families, and other agencies to prevent truancy and dropout in the at-risk student population.

Questions come from the Fast Response Survey System (FRSS) Dropout Prevention Services and Programs survey (See Appendix B) which was developed by the United States Department of Education National Center for Education Statistics to collect data

on how public-school districts identify students at risk of dropping out, programs used specifically to address the needs of students at risk of dropping out of school, the use of mentors for at-risk students, and efforts to encourage dropouts to return to school ... intended to increase the rate at which students are staying in school, progressing toward graduation, or earning a high school credential.

(US Department of Education, 2011c)

The survey consists of 16 multi-part Likert-style questions that have been found to take not more than 20 minutes to complete (US Department of Education, 2010).

The survey instrument was designed to curtail non-sampling errors and maximize validity and reliability; in order to lessen measurement error NCES pre-tested the survey definitions and questions to maximize consistency and minimize ambiguity (US Department of Education, 2011a). For this research study, the FRSS Dropout Prevention Services and Programs Survey instrument was re-created using the online Qualtrics program available from Plymouth State University. Demographic questions were omitted.

According to survey researcher Don Dillman (1998), in the absence of other sources of error the number of respondents strongly affects the accuracy of survey results. Non-response error remains a risk in this study, however “evidence exists that multiple contacts increase response rates in e-mail surveys” (p. 380). In order to maximize responses, a number of strategies were used including notice of the survey, follow-up reminders, and incentives.

The following steps taken from Dillman’s tailored design strategy were meant to reduce total survey error throughout the survey stage of this project by building positive social exchange meant to encourage participation (Dillman, et al., 2014). An initial introduction was sent to the school email address of the principal for each of the 99 public schools serving students in grades 9 through 12 in New Hampshire.

This correspondence explained the purpose of the study and its importance; directed recipients to read the attached informed consent information which disclosed details about the study such as its risks, benefits, confidentiality, and ability to withdraw; and requested that the questionnaire be forwarded for completion to the school’s Dropout Prevention, At-Risk School Coordinator, or staff member most knowledgeable about the

school's dropout prevention practices (See Appendix C). An individual link to the online survey was included, with instructions to forward the email to the school staff member most knowledgeable about dropout prevention services and a warning that the included digital link could only be used once.

Upon clicking the survey link, the participant was directed to the opening page of the survey which contained the informed consent form (See Appendix D); consent was obtained by the participant selecting "I consent to participate in this study", at which point they were granted access to the survey questions. To maximize response rates, an optional anonymized raffle was conducted. This incentive was connected to participants' submission of the questionnaire, but not linked to individual data responses. Upon submission of the questionnaire, each participant was given a link to follow to provide their email address for entry into the raffle; two participant email addresses were randomly chosen upon completion of the survey period, and a \$25 gift card was sent to each winner's address via email. No other personally identifiable information was collected from participants; email addresses collected as part of the incentive raffle were stored in a password protected folder on a secure hard drive maintained in the researcher's home office, and destroyed within 10-days of completion of the research study. Participants who did not wish to enter the raffle could close out of the survey window without following the raffle link.

The self-administered questionnaire could be completed on a desktop computer, laptop, tablet, or other smart mobile device connected to the internet. Respondents were able save their progress and return to complete the questionnaire on the same device at a more convenient time, while only being able to submit one completed survey per link to

avoid the possibility of multiple responses from one school. Follow-up reminders emphasizing the importance of participant input were sent to non-respondents one, three, and five weeks after the original invitation, and survey access was closed on day 42.

Once a survey was completed, data was anonymized by Qualtrics before it became accessible. Anonymized data was downloaded from Qualtrics into spreadsheets for analysis. Frequency tables were created, and responses compared for similarities, differences, and trends in the data. Responses were sorted by question for cross-case analysis, and also by individual respondent for comparative analysis (Patton, 2002). Unless it was apparent that the participant had opted out of the rest of the survey, nonresponse items in otherwise completed survey questionnaires were counted as a “no” response. Coding of survey data utilized the categories present in the survey codebook, and open or axial coding was used for answers to open-ended “other” choices in the survey as deemed appropriate.

Patton (2002) noted that the substantive significance of qualitative research is more important than its statistical significance, which means that the credibility of research results is determined by how consistent they are both internally and compared to external knowledge, how coherently they describe the entire phenomenon, how concrete the evidence is in support of the findings, and how constructive they are in terms of developing a consensual validation of the program. Procedures recommended by Creswell (2018) were used to verify or increase the credibility of results to include cross-question and cross-respondent triangulation; careful coding to minimize incidental shifts in meaning also safeguards validity. Survey results were compared for data convergence or dissonance and integrated to establish a theory of implementation (Creswell, 2018).

Findings from Phases II and III were compared with Phase I program theory in order to understand whether program components were implemented according to policymakers' intentions, whether desired outcomes were met, if there were any unintended consequences of the policy change, and to affirm the authenticity and appropriateness of the theory of change. Alternative theories were identified.

“These triangulation techniques involving the reconciliation of qualitative and quantitative data sources provide the lynchpin for improving the quality of inferences” (Tashakkori, 1998, p. 169).

In addition to convergence triangulation, member checking, which involves gathering feedback from participants to determine the credibility of identified categories and themes, was planned to improve the trustworthiness of research results (Patton, 2002). So as to determine the accuracy of the theory of change, I had planned to invite education stakeholders contemporaneous with SB18(2007) to review and comment on study results (Creswell, 2018). A de facto external audit conducted by dissertation committee members provided objective assessment of the quality of the entire research project (Creswell, 2018). Final comparison of the developed theory of change with research-supported best practices improved the ability of the researcher to make recommendations that might be useful for policymakers, school district staff, and administrators.

Limitations

This mixed-methods combination of quasi-experimental time series and surveys embedded within a theory of change was designed to answer the research questions in a contextually and methodologically sound evaluation while mitigating limiting factors (American Evaluation Association, 2016). Patton (2002) warns that the complexities of mixed methods research studies make them labor intensive, however the ability to triangulate data both between and within methods in order to improve the quality, credibility, and interpretability of the research more than make up for this limitation. Comparing actual outcomes with those intended by the creators of the SB 18(2007) policy change should also mitigate any potential researcher bias.

While it is possible that the findings of this study could be context dependent, that would be okay as it was ultimately the goal of this researcher to determine the reality of the present situation based on the context of policymakers' stated intentions within the state of New Hampshire in order to assess the effectiveness of the policy change; this study is limited in scope to address questions related to high school dropout and completion from New Hampshire public schools. The fate of students who attend private schools, or those who transfer from public high school into alternative programs such as home education or adult education was outside the scope of this investigation. Patton (2002) posited that it is desirable for summative evaluations to yield results that allow "generalizations about effective types of interventions and the conditions under which those efforts are effective ... generalizations about all interventions with similar goals ... [and] generalizability to future efforts and to other programs and policy issues" (p. 224). If one operates under the crucial assumption that success under particular conditions

should be independent of location (Patton, 2002), results of this research study should be generalizable across school districts in New Hampshire, as well as other states using similar dropout prevention methods.

However, Yin (1998) counters that generalization is not the goal of qualitative research; instead, its value lies in the development of themes within the context of a specific setting which can only be generalized to a broader theory, with each new study adding to the analytic generalization of knowledge about a phenomenon. If that is the case, the qualitative instrument and analysis of this research study are only generalizable to support the theory of change – and results are only generalizable to the extent that they provide verification or contradiction to policymakers about their underlying assumptions for the SB18(2007) policy change.

A number of factors contribute to the usefulness of research findings, namely how consistent and accurate research instruments are at providing reliable quantitative and qualitative data, and to what degree the design and methods address research questions to produce valid quantitative and credible qualitative interpretations; the use of reliable instruments is necessary to obtain valid and credible research results (Fraenkel, 2006; Mertens, 2012; Patton, 2002). Internal validity and credibility refer to the ability of the researcher to be certain that inferred findings and explanations are a result of the measured elements and not some other influence, while external validity is the ability to replicate research findings and generalize them to other settings or groups (Boudah, 2011; Fischer, 1999; Stufflebeam, 2007). The use of appropriate sampling techniques, reliable instruments, and statistical tests helps mitigate threats to validity (McDavid, 2005).

Summary

The purpose of this study was to investigate the following questions:

1. What program changes did NH policy makers intend to make with SB18(2007)?
2. How did dropout and completion rates of New Hampshire public high school students differ before and after the SB18(2007) policy change?
3. How are the practices employed by schools with students at risk of dropping out aligned with SB18(2007)?
4. Were there any unplanned consequences related to this policy change?

The design for this study was that of an explanatory sequential mixed methods summative outcome evaluation. Methods used were a quantitative time series embedded within a mixed-methods theory of change. Phase I of this study consisted of the development of a program theory for SB18(2007) based on a content analysis of legislative records and news articles. Phase II examined the outcome of the policy change by applying a quasi-experimental time series to the population of all reported New Hampshire public high school dropouts and completers for pre and post policy-change comparison via descriptive statistics and graphical analyses. Phase III applied an existing quantitative dropout prevention survey to the population of all New Hampshire public high schools. Coding and thematic analysis of data collected in Phase III was integrated to develop a theory of implementation, which converged with the theory of program developed in Phase I to establish a theory of change for the SB18(2007) policy change. The purposes of this study were to determine the efficacy of the policy change and whether or not it was implemented according to the intentions of policymakers, and to document the effectiveness of the existing program or provide a basis for making further changes.

Chapter 4: Findings and Recommended Actions

The purposes of this chapter are to present the findings of my research, and to recommend actions based on those findings. This study was the result of curiosity about the efficacy of an education policy change in New Hampshire that effectively raised the age of compulsory school attendance to 18-years-old. The legal change, enacted in 2007 and implemented in 2009, eliminated the ability for parents to withdraw a child from compulsory education at age 16, resulting in a requirement for students to stay in school until they either obtain a graduation credential or turn 18; it also created a method for students aged 16 and older to obtain a waiver from public school attendance by establishing an approved alternative learning (NH General Court, 2007). I examined policymakers' intentions and subsequent school practices to develop a theory of change with which to evaluate the affected New Hampshire public high school education program. It was my intention to analyze observable outcomes in an unbiased way against this set of objective criteria in an attempt to answer the following questions:

1. What program changes did NH policy makers intend to make with SB18(2007)?
2. How did dropout and completion rates of New Hampshire public high school students differ before and after the SB18(2007) policy change?
3. How are the practices employed by schools with students at risk of dropping out aligned with SB18(2007)?
4. Were there any unplanned consequences related to this policy change?

This evaluation was broken down into three steps: 1) develop a theory of program based on policymakers' intentions, 2) observe the outcome of the change in terms of high school dropout and completion rates, and 3) determine an implementation theory of what dropout prevention practices school districts employ. The completed theory of change

evaluates the alignment of these program and implementation theories alongside observed outcomes to discuss in what ways the policy change has been effective in meeting its goals.

Discussion of the Findings

Phase I: Program Theory

In Phase One of this study, I sought to establish a program theory for the policy change in order to answer the question: What program changes did NH policy makers intend to make with SB18(2007). I searched the archives of the top ten newspapers in New Hampshire, as measured by daily circulation shown in Table 4.1, for articles pertaining to high school dropout or drop out (Wikipedia, n.d.-a, n.d.-b, n.d.-c, n.d.-d, n.d.-e, n.d.-f, n.d.-g, n.d.-h, n.d.-i, n.d.-j).

Table 4.1

Top 10 New Hampshire Newspapers

Newspaper	Daily Circulation
New Hampshire Union Leader	45500
Foster's Daily Democrat	20000
Concord Monitor	20000
Laconia Daily Sun	18000
Valley News	16500
Conway Daily Sun	16000
Keene Sentinel	14000
Claremont Eagle Times	9000
Nashua Telegraph	8500
Portsmouth Herald	6200

I also downloaded both the Senate (2007) and House (2007) files from the New Hampshire General Court website, and converted them from Adobe PDF to MS Word documents in order to make the scanned documents legible in a digitized format that could be manipulated within the coding.

I applied both inductive and deductive content analysis strategies to find patterns in the bill text of SB18(2007), written and oral testimony from public hearings, and meeting minutes from the NH Senate and House Education Committees to determine policymakers' intentions for the change. Beginning with dropout prevention measures listed in the National Center for Education Statistics Codebook from the Fast Response Survey System Dropout Prevention Services and Programs Survey (US Department of Education, 2011c), I developed a coding system in MaxQDA which I assigned to the legislative documents as well as the 14 articles from New Hampshire news media sources which directly referenced the bill (Asmar, 2007; Conaboy, 2006; Dornin, 2017; "Editorial," 2007; "Keeping," 2007; "Lynch," 2007; Fahey, 2007a, 2007b, 2007c; Leibowitz, 2007; Love, 2007; Moskowitz, 2006, 2007; Tracy, 2007). I identified instances in the text of policymakers stating their reasons for supporting and opposing the bill, and labeled them with codes in order to categorize motivations for the policy change. When a piece of testimony did not fit with an existing code, I used open coding to catalog the data within a new category (MaxQDA, 2022). A total of 98 codes were applied to 749 segments within 16 documents. By looking for recurring patterns in the data, I was able to use axial and selective coding to consolidate it into broader themes to determine a program theory of legislative intent for the policy change (See Figure 4.1). Reasons for support or opposition given by policymakers were consistent across data sources.

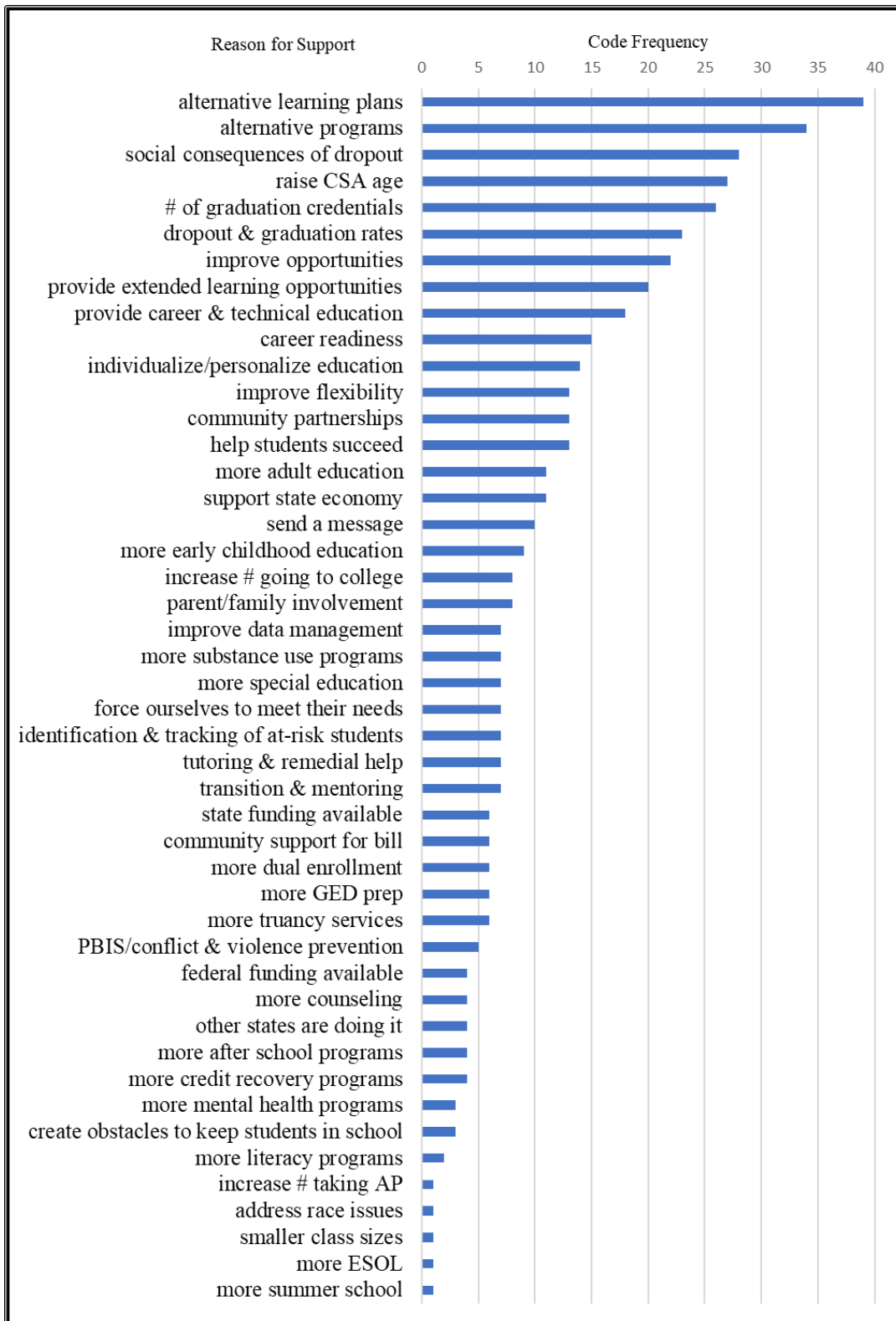
Italicized phrases in the following paragraphs reflect code labels with relatively high frequency rates.

Principal reasons given for support of the bill were to *raise the compulsory school attendance age* in order to *improve dropout and graduation rates*, along with the need for *flexible, personalized, alternative learning plans* that would make use of a wide variety of *alternative education services and programs*. Ameliorating the *social consequences of dropping out* by *providing more opportunities* for at-risk students to *obtain a graduation credential* and *improve their future prospects* in life were also highly ranked reasons for the policy change. Opponents pointed out that *dropout and graduation rates were already improving* in 2007, at the same time that a large number of high-school noncompleters were *obtaining an alternative graduation credential* such as the GED, so that the actual number of uncredentialed people in New Hampshire was inaccurately represented by reported dropout figures.

Increased funding required for programs needed to keep at-risk students in school was the primary reason for opposition to the bill, however funding was also a reason given in support of the policy change. In particular, increased focus on the high school dropout problem at that time led to an expansion in federal and state financial support for the initiation of dropout prevention programs.

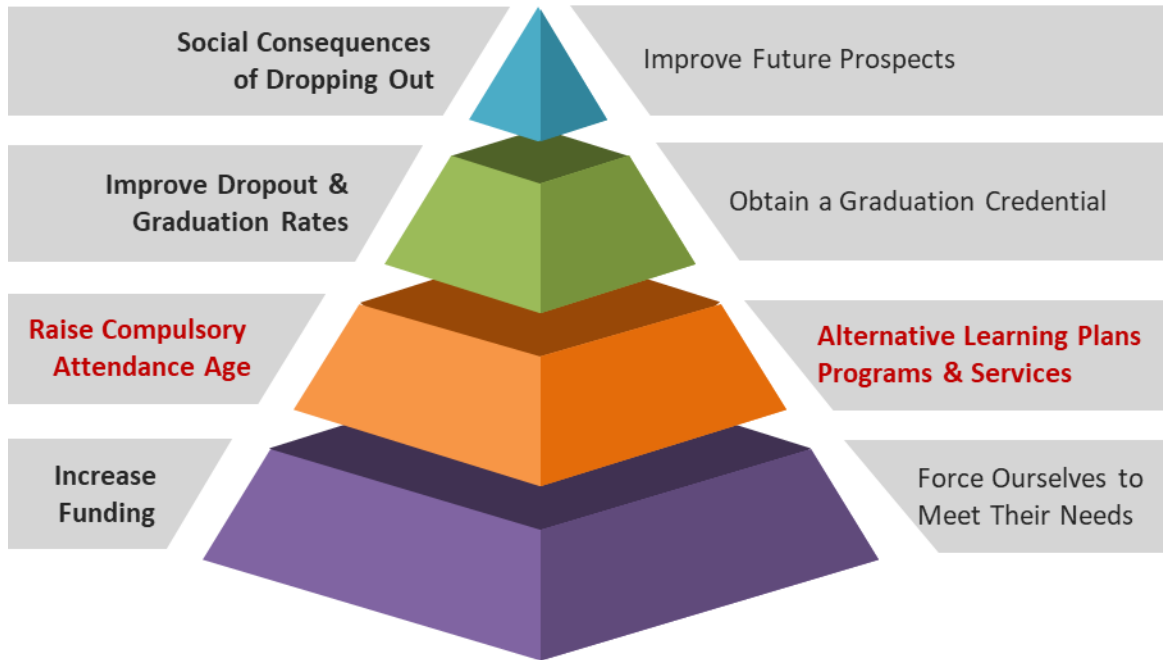
Figure 4.1

Program Theory: Reasons for SB18(2007)



Just as original compulsory school attendance laws were enacted to induce government funding of public schools, the prime sponsor of SB18(2007) intimated that the bill was designed to compel more government spending for the education of at-risk students when she noted that its passage would be tantamount to “*forcing ourselves to meet their needs*” (SB18 Senate File, Pos. 272). Opponents were concerned with not just the *lack of programs and services available* to students forced to create an alternative plan for school completion, but the *potential for an unfunded mandate* after startup funding expired that would leave unwilling students without alternative options, *forcing them to stay* and thereby *increasing behavioral problems in schools* and disrupting the education of more eager students.

Top level themes that emerged from concept mapping of coded intentions for enacting the policy change were a desire to improve the future prospects of at-risk students in order to lessen the social consequences of high school dropout (Figure 4.2). The path to achieving these lofty goals are supporting themes of improving dropout and graduation rates by increasing the number of graduation credentials awarded through the legislative acts of raising compulsory age and creating alternative learning plans, programs, and services. The foundation of this policy change is a design to compel the education establishment to meet the needs of at-risk students, and to oblige governments to increase education funding if necessary to do so.

Figure 4.2*Program Theory: Intention for Policy Change*

Trying to determine the efficacy of a policy change by establishing causality between that change and broad social conditions is a task beyond the scope of this research project. For the purposes of this dissertation, I will focus on examining the relationship between the SB18(2007) policy change and the measurable education outcomes which emerged within the program theory, namely

- 1) dropout and graduation rates, graduation credentials, and
- 2) alternative programs and services offered by school districts.

Phase II: Observed Outcomes

If the first goal of my SB18(2007) Program Theory, in *raising compulsory school attendance age* is to keep students in school longer who would otherwise dropout, it is with the hope or expectation that they might use that time *to earn some form of graduation credential*. Whether this goal was accomplished could be investigated through an analysis of dropout and prevention rates. Phase Two of this research study aims to examine the relationship between passage and implementation of SB18(2007) and New Hampshire dropout and completion rates. In order to accomplish this task, I gathered enrollment, completion, and early exit information from reports available on the New Hampshire Department of Education website for all public schools serving students in grades 9-12 which existed in the state between 2001 and 2022 (Table 4.2) (NH Department of Education, n.d.-a, n.d.-b, n.d.-c, n.d.-d).

Table 4.2

Public Schools Serving Grades 9-12 between 2001 to 2022

Type	Number
Traditional	80
Charter	22
Alternative	2
Academy	2
Joint Maintenance Agreement	1

I compiled the data by year before calculating state-total event completion and dropout rates for school years 2001-2002 through 2021-2022. Because legislators were concerned with the number of students obtaining a graduation credential, regardless of whether it was a state or district diploma or an alternative credential, I also included an analysis of the numbers of alternative graduation credentials awarded in New Hampshire; the General Educational Development (GED) and High School Equivalency Diploma (HiSET) are nationally recognized alternative graduation credentials which are awarded to students upon successful completion of a series of tests.

In the following tables and figures, a dashed blue line represents the passage of SB18(2007), while a solid blue line represents the implementation of the bill. The yellow line indicates the NH Department of Education's (2014) switch from the GED exam to the HiSET test, and the red line indicates the last school year before the COVID-19 pandemic wreaked havoc with the world.

Completers. Using the formula in (3.1), I calculated the Event Completion Rates in Table 4.3. It is apparent that the number of Reported Nonstandard Diplomas awarded exceeded the number of Reported Nonstandard Enrollments during many school years, making it clear that some nonstandard (special education) diplomas must have been awarded to students who were included in the regular enrollment count. Consequently, I combined regular grade 12 enrollments with nonstandard enrollments to use as a basis for calculating the combined completion rates of students who obtained both regular and nonstandard diplomas.

Table 4.3*Calculated Event Completion Rates*

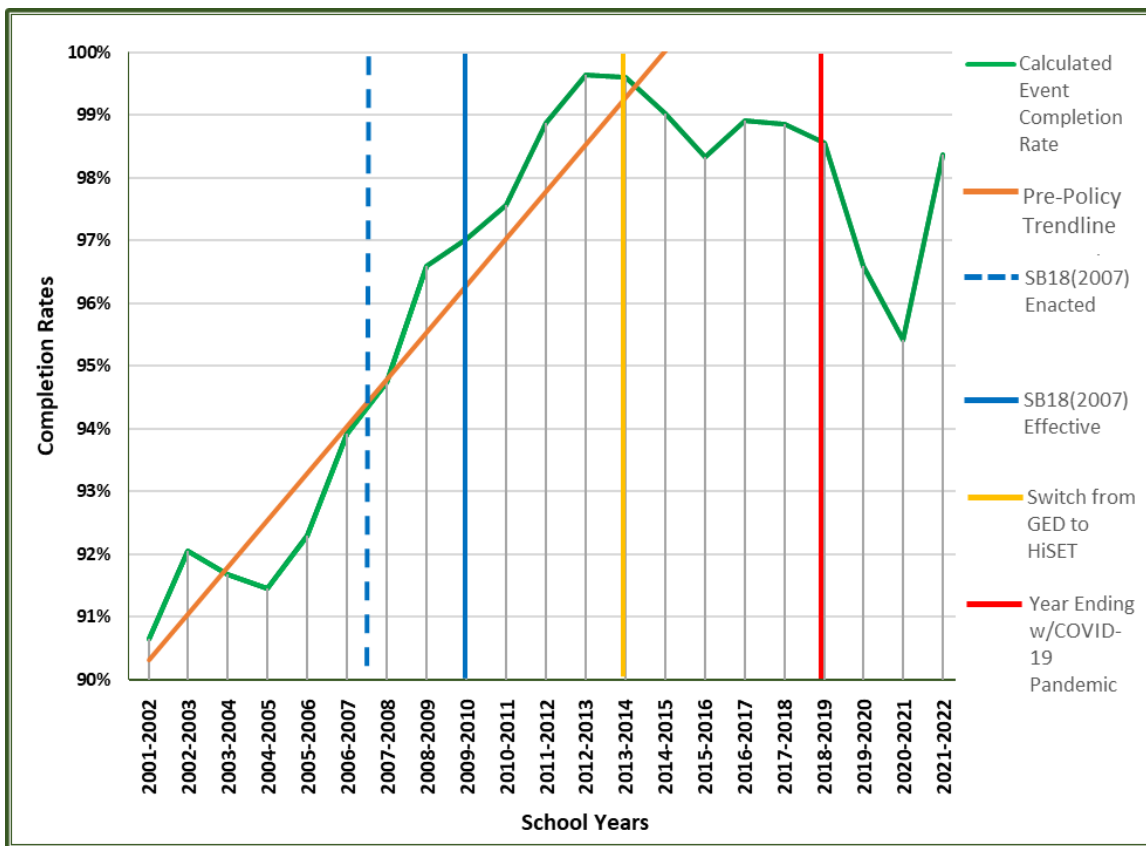
School Years	Reported Grade 12 Enrollments	Reported Nonstandard Enrollments	Calculated Grade 12 & Nonstandard Enrollments	Reported Regular Diplomas	Reported Nonstandard Diplomas	Calculated Regular & Nonstandard Diplomas	Calculated Grade 12 & Nonstandard Completion Rates
2001-2002	13309	244	13553	12,171	114	12285	90.64%
2002-2003	14280	189	14469	13,004	314	13318	92.05%
2003-2004	14445	203	14648	13,309	119	13428	91.67%
2004-2005	14847	293	15140	13,775	72	13847	91.46%
2005-2006	15001	235	15236	13,988	74	14062	92.29%
2006-2007	15471	21	15492	14,452	98	14550	93.92%
2007-2008	15918	41	15959	15,010	110	15120	94.74%
2008-2009	15419	22	15441	14,759	156	14915	96.59%
2009-2010	15588	20	15608	15,034	110	15144	97.03%
2010-2011	14947	21	14968	14,494	110	14604	97.57%
2011-2012	14673	21	14694	14,426	101	14527	98.86%
2012-2013	14404	7	14411	14,262	98	14360	99.65%
2013-2014	13962	13	13975	13,793	125	13918	99.59%
2014-2015	13671	17	13688	13,428	126	13554	99.02%
2015-2016	13752	13	13765	13,423	112	13535	98.33%
2016-2017	13338	1	13339	13,037	157	13194	98.91%
2017-2018	13235	3	13238	12,962	123	13085	98.84%
2018-2019	13073	32	13105	12,785	130	12915	98.55%
2019-2020	13188	37	13225	12,640	135	12775	96.60%
2020-2021	13131	71	13202	12,431	165	12596	95.41%
2021-2022	12880	45	12925	12,577	137	12714	98.37%

The orange forecast trend line in Figure 4.3, based on pre-policy completion rates, illustrates that the state high school completion rate of grade-12 and special education students was increasing from a starting point in school year 2001-2002 which already exceeded 90 percent. The completion rate continued a steep climb from 2004-2005, until it leveled off at more than 99 percent in 2012-2013. A slight dip in the graduation rate occurred starting in 2014, which coincided with the state's change in alternative

graduation credential test provider from the GED to the HiSET. Nevertheless, grade 12 and special education completers remained above 98 percent of corresponding enrollments until the coronavirus pandemic disrupted public education. The rate of grade 12 and special education completers seems to have recovered after schools returned to a post-pandemic state of normalcy.

Figure 4.3

Event Completion Rates



Dropouts.

Annual Event Dropouts. Annual Event Dropout Rates, shown in Table 4.4, were calculated using the formula in (3.2). In order to compare dropout figures between years when the state definition had changed, this study employed total reported Early Exit Non-Graduates; all students who left high school without a regular or nonstandard diploma were counted as dropouts, including those who had received an alternative graduation credential or enrolled in college after dropping out.

Table 4.4

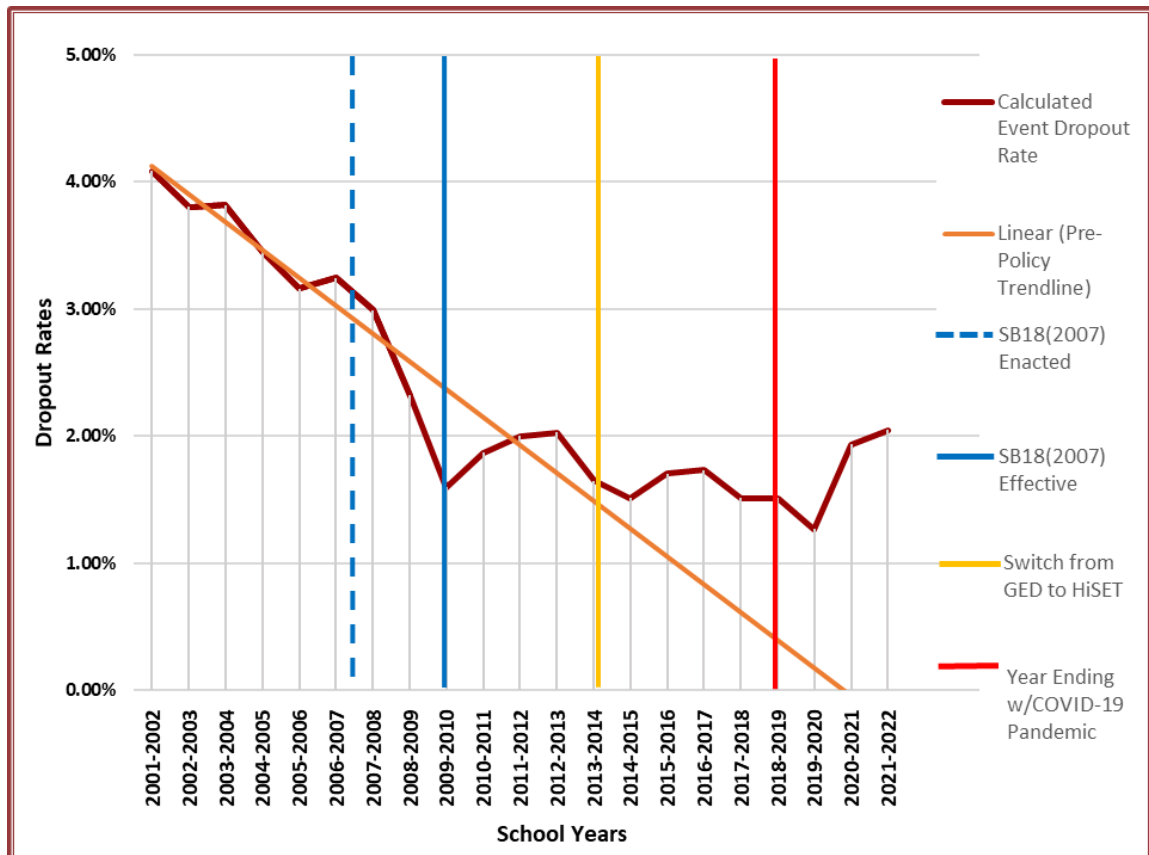
Calculated Event Dropout Rates

School Years	Reported Grade 9-12 Regular & Nonstandard Enrollments	Reported Early Exit Non-Graduates	Calculated Annual Event Dropout Rates
2001-2002	62530	2553	4.08%
2002-2003	64177	2441	3.80%
2003-2004	65528	2500	3.82%
2004-2005	66828	2306	3.45%
2005-2006	67347	2129	3.16%
2006-2007	67384	2185	3.24%
2007-2008	66413	1986	2.99%
2008-2009	64961	1505	2.32%
2009-2010	64392	1028	1.60%
2010-2011	62882	1176	1.87%
2011-2012	61494	1229	2.00%
2012-2013	60114	1220	2.03%
2013-2014	58733	968	1.65%
2014-2015	58158	878	1.51%
2015-2016	57435	978	1.70%
2016-2017	56554	979	1.73%
2017-2018	56035	846	1.51%
2018-2019	55789	843	1.51%
2019-2020	55262	701	1.27%
2020-2021	54779	1059	1.93%
2021-2022	54323	1112	2.05%

Based on pre-policy dropout rates, the orange forecast trend-line in Figure 4.4 indicates that the annual event dropout rate was decreasing at a steady rate from approximately 4 percent in 2001-2002 until passage of the bill in the summer of 2007. From that point, the dropout rate continued to decline at a more precipitous rate than expected until the law was implemented in 2009-2010, when it reached less than 2 percent. Since then, the statewide event dropout rate for the group of all secondary school students has hovered between 1 and 2 percent of student enrollments. Even though the dropout rate remained low through the pandemic, it appears that the disruption to public education affected some students as seen by the slight fluctuation over the last two years for which data was available.

Figure 4.4

Event Dropout Rates



Comparison of Event Dropouts by Grade Level. With completion rates high and overall dropout rates low, I compared grade 12 dropouts with grades 9-11 plus nonstandard dropouts to get a better understanding of who has been dropping out. Table 4.5 presents the number of regular Grade 12 noncompleters calculated using the formulas in (3.3), together with event dropout rate for regular grade 12 student enrollments.

Table 4.5*Calculated Grade 12 Event Dropout Rates*

School Years	Reported Grade 12 Regular Enrollments	Reported Regular Diplomas	Calculated Grade 12 Regular Noncompleters	Calculated Grade 12 Regular Event Dropout Rates
2001-2002	13309	12171	1138	8.55%
2002-2003	14280	13004	1276	8.94%
2003-2004	14445	13309	1136	7.86%
2004-2005	14847	13775	1072	7.22%
2005-2006	15001	13988	1013	6.75%
2006-2007	15471	14452	1019	6.59%
2007-2008	15918	15010	908	5.70%
2008-2009	15419	14759	660	4.28%
2009-2010	15588	15034	554	3.55%
2010-2011	14947	14494	453	3.03%
2011-2012	14673	14426	247	1.68%
2012-2013	14404	14262	142	0.99%
2013-2014	13962	13793	169	1.21%
2014-2015	13671	13428	243	1.78%
2015-2016	13752	13423	329	2.39%
2016-2017	13338	13037	301	2.26%
2017-2018	13235	12962	273	2.06%
2018-2019	13073	12785	288	2.20%
2019-2020	13188	12640	548	4.16%
2020-2021	13131	12431	700	5.33%
2021-2022	12880	12577	303	2.35%

Next, I used the formulas in (3.4) to subtract the regular Grade 12 noncompletion total from all reported noncompleters in order to obtain a number of Grades 9-11 and nonstandard noncompleters. To avoid counting nonstandard diploma graduates as dropouts, I subtracted nonstandard graduates from the grade 9-11 plus nonstandard enrollments to find the adjusted number of Grades 9-11 and nonstandard enrollments to use in calculating the event dropout rate for this group, as presented in Table 4.6.

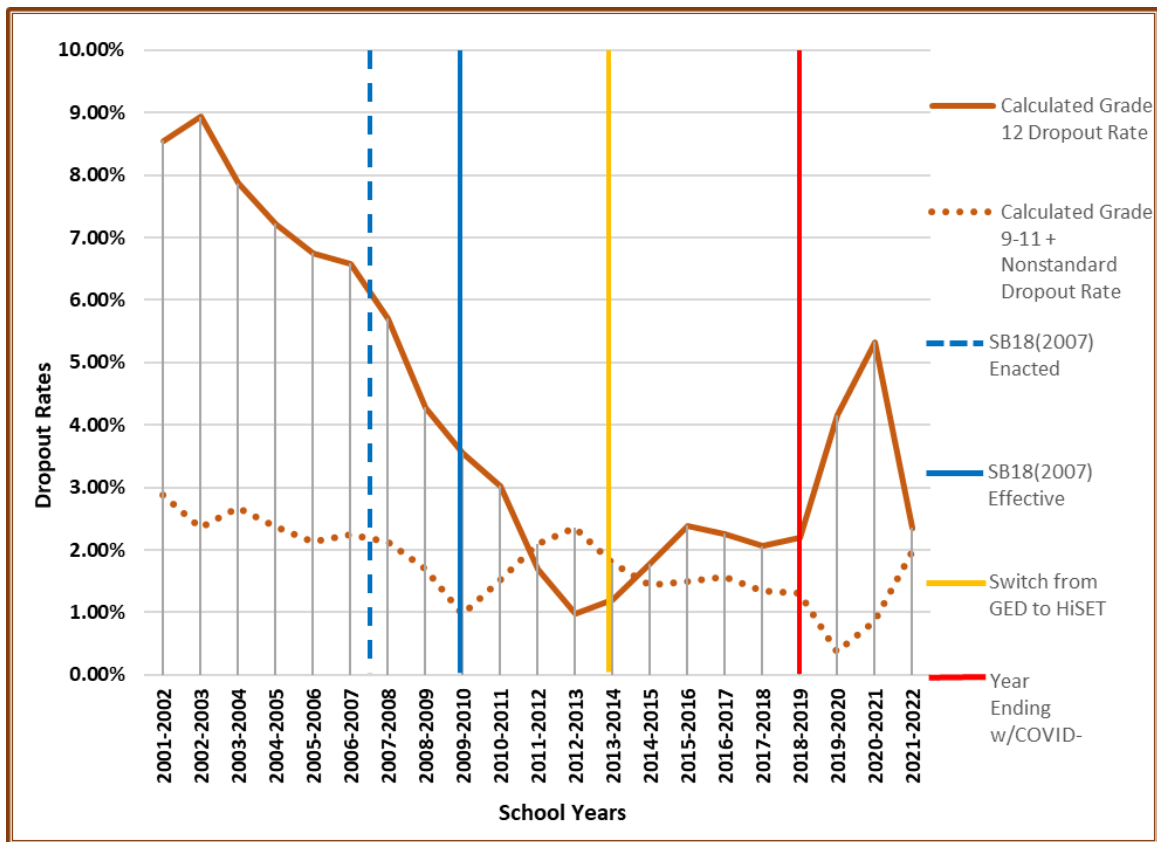
Table 4.6*Calculated Grades 9-11 & Nonstandard Event Dropout Rates*

School Years	Reported Grades 9-12 & Nonstandard Noncompleters	Calculated Grade 12 Noncompleters	Calculated Grades 9-11 & Nonstandard Noncompleters	Reported Grades 9-11 & Nonstandard Enrollments	Reported Nonstandard (Special Education) Diplomas	Calculated Grades 9-11 & Nonstandard Enrollments w/out Diploma	Calculated Grade 9-11 & Nonstandard Event Dropout Rates
2001-2002	2553	1138	1415	49221	114	49107	2.88%
2002-2003	2441	1276	1165	49897	314	49583	2.35%
2003-2004	2500	1136	1364	51083	119	50964	2.68%
2004-2005	2306	1072	1234	51981	72	51909	2.38%
2005-2006	2129	1013	1116	52346	74	52272	2.13%
2006-2007	2185	1019	1166	51913	98	51815	2.25%
2007-2008	1986	908	1078	50495	110	50385	2.14%
2008-2009	1505	660	845	49542	156	49386	1.71%
2009-2010	1028	554	474	48804	110	48694	0.97%
2010-2011	1176	453	723	47935	110	47825	1.51%
2011-2012	1229	247	982	46821	101	46720	2.10%
2012-2013	1220	142	1078	45710	98	45612	2.36%
2013-2014	968	169	799	44771	125	44646	1.79%
2014-2015	878	243	635	44487	126	44361	1.43%
2015-2016	978	329	649	43683	112	43571	1.49%
2016-2017	979	301	678	43216	157	43059	1.57%
2017-2018	846	273	573	42800	123	42677	1.34%
2018-2019	843	288	555	42716	130	42586	1.30%
2019-2020	701	548	153	42074	135	41939	0.36%
2020-2021	1059	700	359	41648	165	41483	0.87%
2021-2022	1112	303	809	41443	137	41306	1.96%

In looking at Figure 4.5, it is interesting to note that the grades 9-11 and nonstandard dropout rate remained relatively stable, between 1.5 and 2.5 percent of corresponding enrollments, throughout the time period from 2001-2002 through 2018-2019. Improvements in the dropout rate during that time period appear to come from regular grade 12 student enrollments, with a steady decline in grade 12 dropouts from school years 2001-2002 until 2011-2012, when the rate reached 1 percent. Since that time, the grade 12 dropout rate remained in the 1 to 2 percent range until the pandemic.

Figure 4.5

Comparison of Calculated Dropout Rates: Grade 12 vs. Grades 9-11 & Nonstandard



Dropout rates for both groups continued to change after passage and implementation of SB18(2007) at rates analogous to their pre-policy trends. However, both groups were notably affected by the pandemic, with grade 12 dropout rates spiking to more than 5 percent, and the grades 9-11 plus nonstandard dropout rate decreasing to a fraction of a percent; both groups appear to have returned to pre-pandemic levels.

Event Dropout Rates by Public School Type. Although charter schools were first conceived as an idea in the 1970s as a way to stimulate competition in education, the charter school movement in the United States did not begin until the early 1990s (Public Charter Schools Insider, 2023). Alternative high schools were designed to educate students who were unsuccessful in traditional schools (Logsdon, 2020). They are both often good options for students who otherwise may have dropped out of their local public schools. Whether or not those students were able to graduate, or dropped out of the nontraditional placement, is an interesting question. A comparison of dropout rates according to public school type is possible due to the way the New Hampshire Department of Education reports its figures by school, (See Table 4.7).

According to school enrollment records, the charter school movement did not catch up to New Hampshire until 2004. Since that time, 22 charter schools serving high school students have opened at locations throughout the state, and seven of them have subsequently closed. After the funding struggles of the first district-sponsored alternative school, which caused its failure after three years, only two school districts have opened alternative high schools (Arlinghaus, 2005).

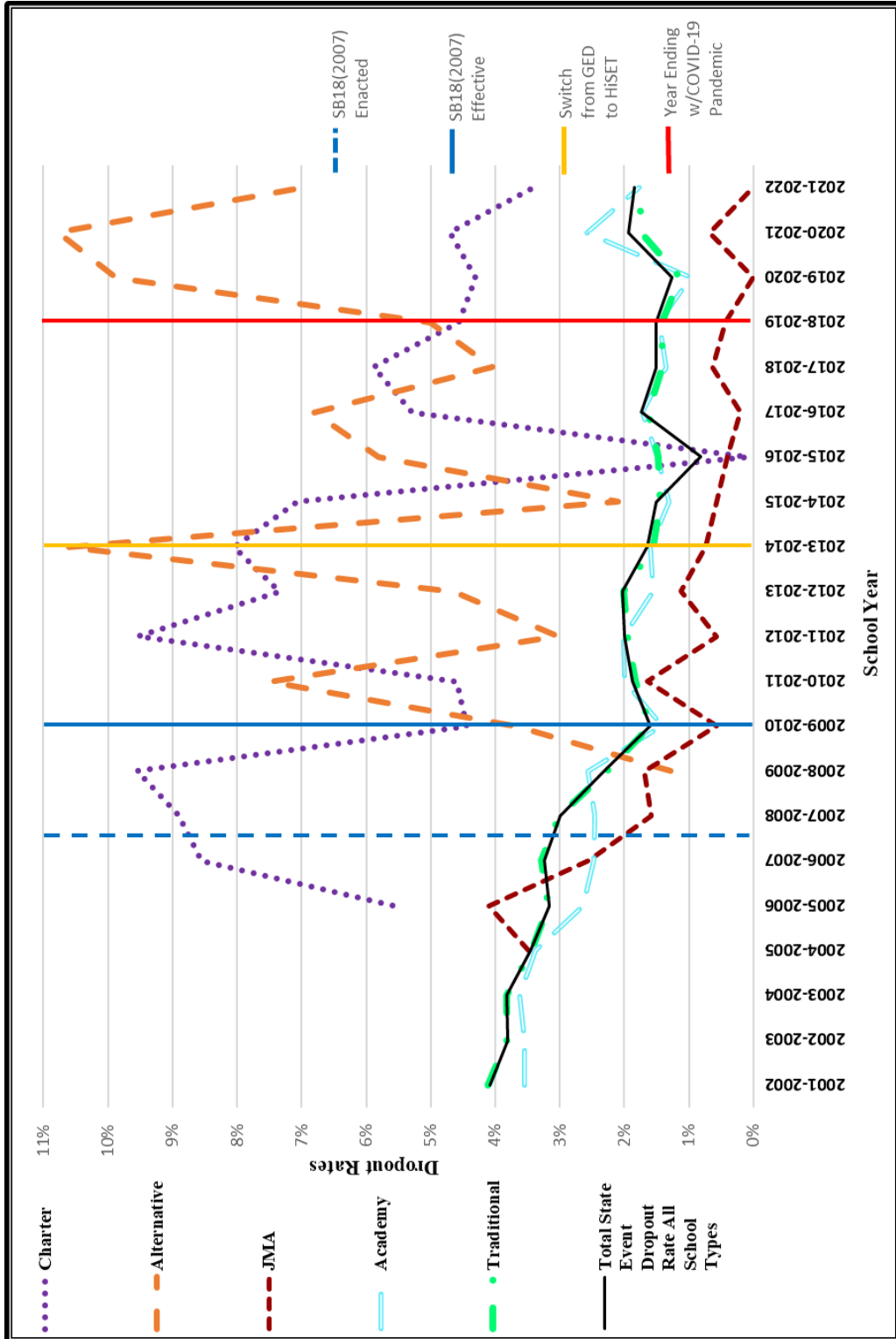
Table 4.7*Calculated Event Dropout Rates by Public School Type*

School Years	Charter	Alternative	JMA	Academy	Traditional	Total State Event Dropout Rate All School Types
2001-2002				3.55%	4.12%	4.08%
2002-2003				3.55%	3.82%	3.80%
2003-2004				3.62%	3.83%	3.82%
2004-2005			3.49%	3.37%	3.44%	3.45%
2005-2006	5.59%		4.10%	2.65%	3.18%	3.16%
2006-2007	8.55%		2.55%	2.47%	3.28%	3.24%
2007-2008	8.91%		1.59%	2.45%	3.01%	2.99%
2008-2009	9.55%	1.28%	1.69%	2.56%	2.27%	2.32%
2009-2010	4.44%	3.67%	0.57%	1.42%	1.60%	1.60%
2010-2011	4.60%	7.50%	1.65%	2.00%	1.83%	1.87%
2011-2012	9.53%	3.03%	0.57%	2.01%	1.95%	2.00%
2012-2013	7.35%	4.64%	1.12%	1.56%	2.01%	2.03%
2013-2014	8.05%	10.63%	0.74%	1.60%	1.55%	1.65%
2014-2015	7.07%	2.09%	0.57%	1.30%	1.45%	1.51%
2015-2016	0.08%	5.80%	0.40%	1.49%	1.48%	0.82%
2016-2017	5.28%	6.80%	0.20%	1.73%	1.63%	1.73%
2017-2018	5.89%	4.05%	0.63%	1.36%	1.41%	1.51%
2018-2019	4.57%	5.01%	0.43%	1.45%	1.42%	1.51%
2019-2020	4.30%	9.87%	0.00%	0.97%	1.14%	1.27%
2020-2021	4.70%	10.77%	0.68%	2.58%	1.74%	1.93%
2021-2022	3.42%	7.00%	0.00%	1.77%	1.77%	1.84%

It is apparent from Figure 4.6 that charter and alternative schools in New Hampshire see higher levels of dropout than other types of schools. Charters and alternatives were just getting off the ground in New Hampshire at the time SB18(2007) was passed and implemented. It appears that both types of schools got off to a rocky start with dropout rates fluctuating from five to ten percent since their launch.

Figure 4.6

Event Dropout Rates by Public School Type



It is notable, however, that they saw a sharp decline when the state changed alternative credentialing test providers from the GED to the HiSET. This is likely because, after 2014, students could remain enrolled in school while they obtained their alternative graduation credential (GED Testing Service, 2022; PSI Exams, n.d.).

Looking more closely, is remarkable to see the effect it appears charter and alternative schools have had on the dropout rates of other types of schools. Peaks and valleys in dropout rates that show up right from the outset of charter and alternative schools roughly correspond with the opposite outcome in the other three types of schools. It appears likely that students who would otherwise have dropped out of traditional public high schools, academies, and joint maintenance agreements dropped out of charter and alternative schools instead. It also looks as if alternative schools were hit hardest by the pandemic, with alternative school dropouts doubling before the delivery of public education normalized.

Alternative Graduation Credentials. Because the program theory for this research study included the intention for the SB18(2007) policy change to increase the number of all graduation credentials awarded, I decided to examine alternative graduation credential (GED and HiSET) numbers in relation to the policy change. I used data from the early exit reports regarding high school noncompleters who received an alternative graduation credential within a year of leaving school; unfortunately, this data only goes back to the 2007-2008 school year – before that time the state did not report the number of GED earners who had been enrolled in high school within the previous year. Although I was not able to find where the figures are reported to the public, a telephone interview with a staff member at the New Hampshire Department of Education yielded the total

annual number of NH residents who earned an alternative graduation credential from 2005 to 2021 (Wheeler, 2023). Table 4.8 displays Calculated Alternative Graduation Credential Rates for both groups based on their respective populations.

Table 4.8*Calculated Alternative Graduation Credentials*

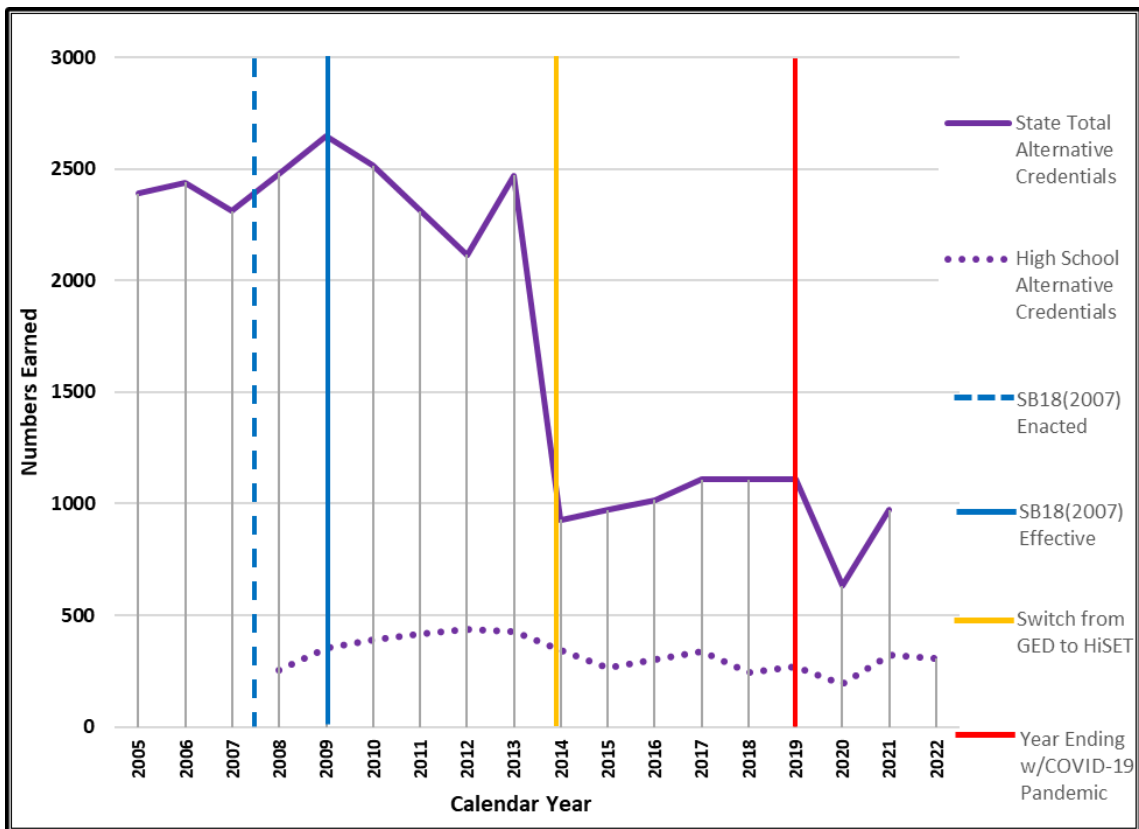
Calendar Years	NH Population	Reported State Total GED/HiSET Earned	NH State Alternative Graduation Credential Rate	School Years	Reported Total High School Enrollments	Reported High School GED/HiSET Earned	NH High School Alternative Credential Rate
2005	1,298,492	2389	0.18%	2004-2005	66828		
2006	1,308,389	2438	0.19%	2005-2006	67347		
2007	1,312,540	2310	0.18%	2006-2007	67384		
2008	1,315,906	2481	0.19%	2007-2008	66413	253	0.38%
2009	1,316,102	2647	0.20%	2008-2009	64961	352	0.54%
2010	1,316,807	2514	0.19%	2009-2010	64392	391	0.61%
2011	1,320,444	2310	0.17%	2010-2011	62882	418	0.66%
2012	1,324,677	2114	0.16%	2011-2012	61494	439	0.71%
2013	1,327,272	2471	0.19%	2012-2013	60114	426	0.71%
2014	1,334,257	927	0.07%	2013-2014	58733	344	0.59%
2015	1,337,480	972	0.07%	2014-2015	58158	263	0.45%
2016	1,343,694	1016	0.08%	2015-2016	57435	300	0.52%
2017	1,350,395	1108	0.08%	2016-2017	56554	338	0.60%
2018	1,355,064	1109	0.08%	2017-2018	56035	245	0.44%
2019	1,360,783	1110	0.08%	2018-2019	55789	270	0.48%
2020	1,378,587	633	0.05%	2019-2020	55262	191	0.35%
2021	1,387,505	973	0.07%	2020-2021	54779	324	0.59%
2022				2021-2022	54323	304	0.56%

Alternative graduation credentials earned by students as they exit high school as noncompleters are denoted alongside the later of the calendar years represented in school year figures. For example, alternative credentials earned by students in the 2007-2008 school year are compared alongside the total state alternative credentials earned in 2008. This approach appears to make the pandemic data for both groups line up neatly.

Figure 4.7 presents the number of alternative graduation credentials awarded statewide, and also to the group of high school early-exiters. When comparing straight figures, it appears that the group exiting high school was not greatly affected by either the policy change or the change in alternative credentialing providers in 2014, with between 200 and 450 early-exit high school students earning alternative graduation credentials each year. Groups of total statewide alternative credential earners showed more variability, with a small increase at passage of the bill, followed by a somewhat larger decrease upon implementation of the policy change.

Figure 4.7

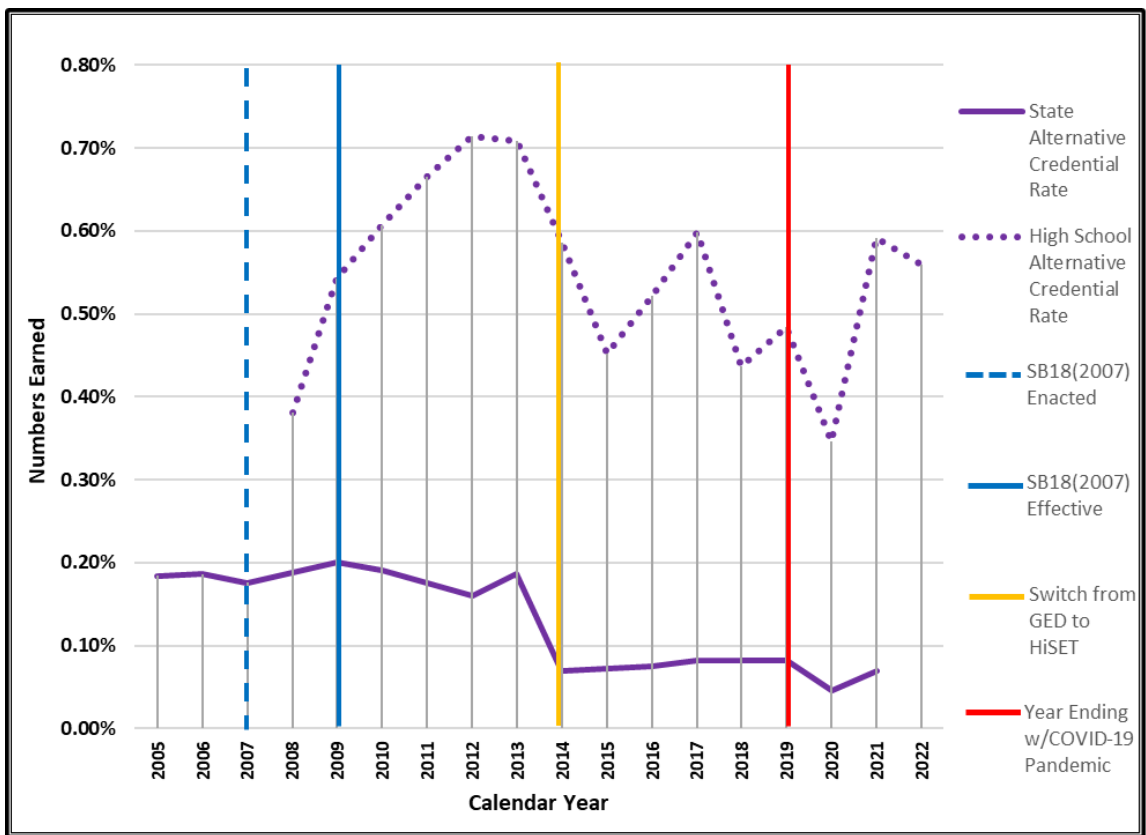
Total Alternative Graduation Credentials Awarded



For a different perspective on the data in Table 4.8, the rates of alternative high school graduation credentialing within the state population and the group of high school early-exiters, displayed in Figure 4.8, shows the opposite conclusion – that high school alternative credentialing was more greatly affected by the policy changes than total state credentialing rates (MacroTrends, n.d.). However, it is important to note that these rates are all below 1 percent of their respective populations, which makes rate changes appear large when in fact they represent only a few individuals each year compared to their population bases.

Figure 4.8

Alternative Graduation Credential Rates



The total number of alternative graduation credentials awarded in the state, as well as the rates of both state credentials and high school non-completers, dropped remarkably when the state switched alternative credentialing test providers from the GED to HiSET in 2014.

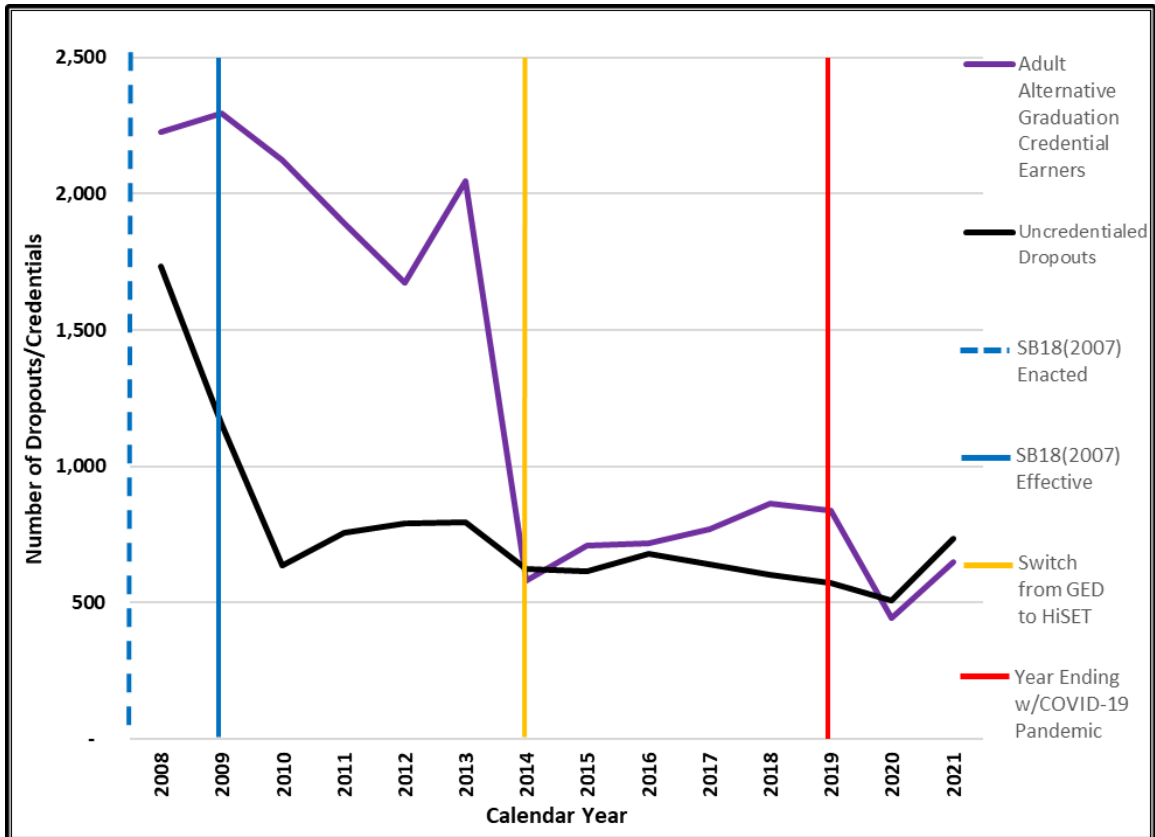
The pandemic appears to have had an odd effect on alternative credential rates, with an unexpected decrease during the first year of the pandemic when one might think more students would be seeking an alternative credential due to the disruption in school programs. This anomaly is likely due to the fact that testing centers closed at the start of the pandemic, in early 2020, and testing for alternate graduation credentials was not available again until remote online proctoring was instituted in 2021.

Dropouts vs. Alternative Graduation Credentials. My final analysis of observed outcomes based on New Hampshire Department of Education data reports was an examination of the number of dropouts leaving school without an alternative graduation credential as compared to the number of non-high school statewide alternative graduation credentials awarded each year, as displayed in Table 4.9. Subtracting high school early exiters who earned an alternative graduation credential from both total state GED/HiSET earned and annual event dropouts yields figures for the number of adult New Hampshire residents earning an alternative credential, and the number of dropouts leaving school with no alternative graduation credential, respectively. This set of calculations – removing high school early exiters who obtained a GED/HiSET within one year of leaving school – allows us to compare two uncredentialed groups.

Table 4.9*Uncredentialed Dropouts vs. Adult Alternative Graduation Credentials*

Calendar Years	Reported State Total GED/HiSET Earned	Reported High School GED/HiSET Earned	Adult Alternative Graduation Credential Earners	Calculated Annual Event Dropouts	Reported High School GED/HiSET Earned	Dropouts without an Alternative Graduation Credential
2005	2389			2306		
2006	2438			2129		
2007	2310			2185		
2008	2481	253	2228	1986	253	1733
2009	2647	352	2295	1505	352	1153
2010	2514	391	2123	1028	391	637
2011	2310	418	1892	1176	418	758
2012	2114	439	1675	1229	439	790
2013	2471	426	2045	1220	426	794
2014	927	344	583	968	344	624
2015	972	263	709	878	263	615
2016	1016	300	716	978	300	678
2017	1108	338	770	979	338	641
2018	1109	245	864	846	245	601
2019	1110	270	840	843	270	573
2020	633	191	442	701	191	510
2021	973	324	649	1059	324	735
2022		304		1112	304	808

Looking at Figure 4.9 it is interesting to note that, even before passage of SB18(2007), more people in New Hampshire had been earning an alternative credential than were dropping out of high school without one. The number of uncredentialed dropouts had been decreasing before implementation of the bill, yet in the first year of the new dropout policy the number of adult alternative credential earners started to drop as well. In 2010, the number of uncredentialed dropouts flattened and has remained relatively constant until now.

Figure 4.9*Uncredentialed High School Dropouts vs. Adult Alternative Graduation Credentials*

However, the difference between the two groups was substantial, with a much larger number of adult credential earners than uncredentialed dropouts, until 2014 when the state changed alternative credentials from the GED to HiSET; at the peak of this phenomenon in 2010, and again in 2013, nearly 1500 more alternative credentials were earned in the state than the number of students who left high school without one. In 2014, the number of adult credential earners dropped precipitously. Between then and now, both groups have remained relatively stable and also similar in size.

Phase III: Implementation Theory

The second goal highlighted by my program theory for SB18(2007) was the creation of *alternative learning plans*. Proponents of the bill intended for at-risk high school students to develop individualized education plans to obtain graduation credentials instead of dropping out. In order to reach this objective, students need access to programs and services that are either a complement-to or substitute-for the traditional public-school programs which apparently were not meeting their needs.

A number of schools opened and closed during the more than 20-year period covered by this study so that by the 2022-2023 school year a total of 99 public schools were serving students in grades 9-12; according to the NH Department of Education 2022-2023 grade level enrollment report, at the time this research was conducted high schools in the state consisted of 79 traditional public schools, seventeen public charter schools, two public academies, and one joint maintenance agreement. In an attempt to develop an implementation theory, I conducted a survey of dropout prevention practices that are currently being used by New Hampshire school districts. I sent an email to the principals of all 99 public high schools for distribution to their dropout prevention specialists. The email contained an invitation to participate in this research study, along with links to both the informed consent form and a Qualtrics survey modified from the US Department of Education National Center for Education Statistics Dropout Prevention Services and Programs Fast Response Survey (See Appendices B-D). Three email reminders were sent over the course of the six-week collection period; eight email addresses bounced, 24 surveys were started, and 12 were submitted. Of the 12 survey responses collected, eight were from traditional public schools,

three from charter schools, and one from a public academy. Table 4.10 and Figure 4.10 reveal that survey response rates from different public-school types were somewhat proportional to the representation of those types in the population of public high schools.

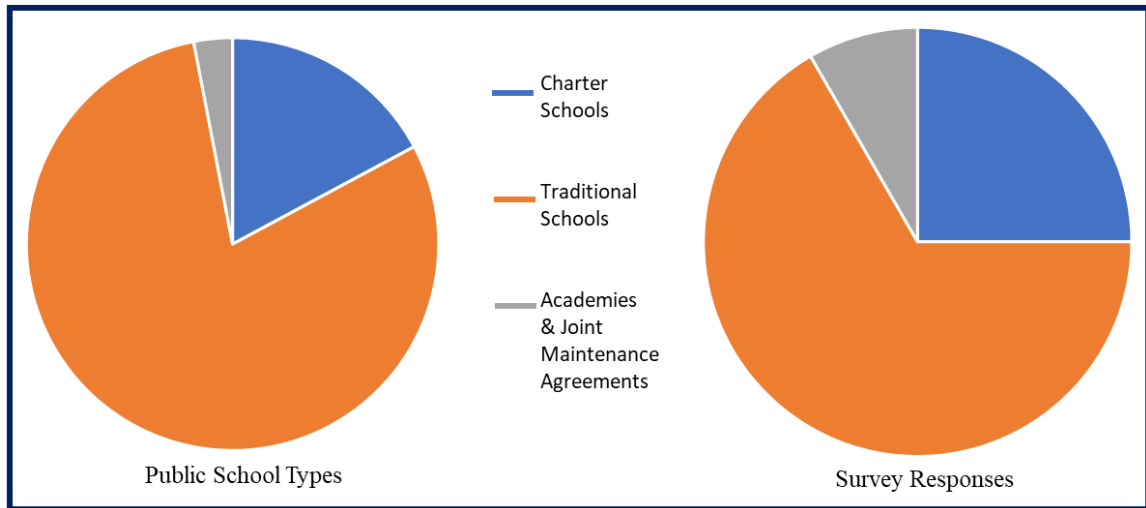
Table 4.10

Public School Types vs. Survey Responses

Public School Types			Survey Responses	
Count	%		Count	%
17	0.17	Public Charter Schools	3	0.25
79	0.80	Traditional Public Schools	8	0.67
3	0.03	Academies & Joint Maintenance Agreements	1	0.08
99	1.00	Total	12	1.00

Figure 4.10

Public School Types vs. Survey Responses



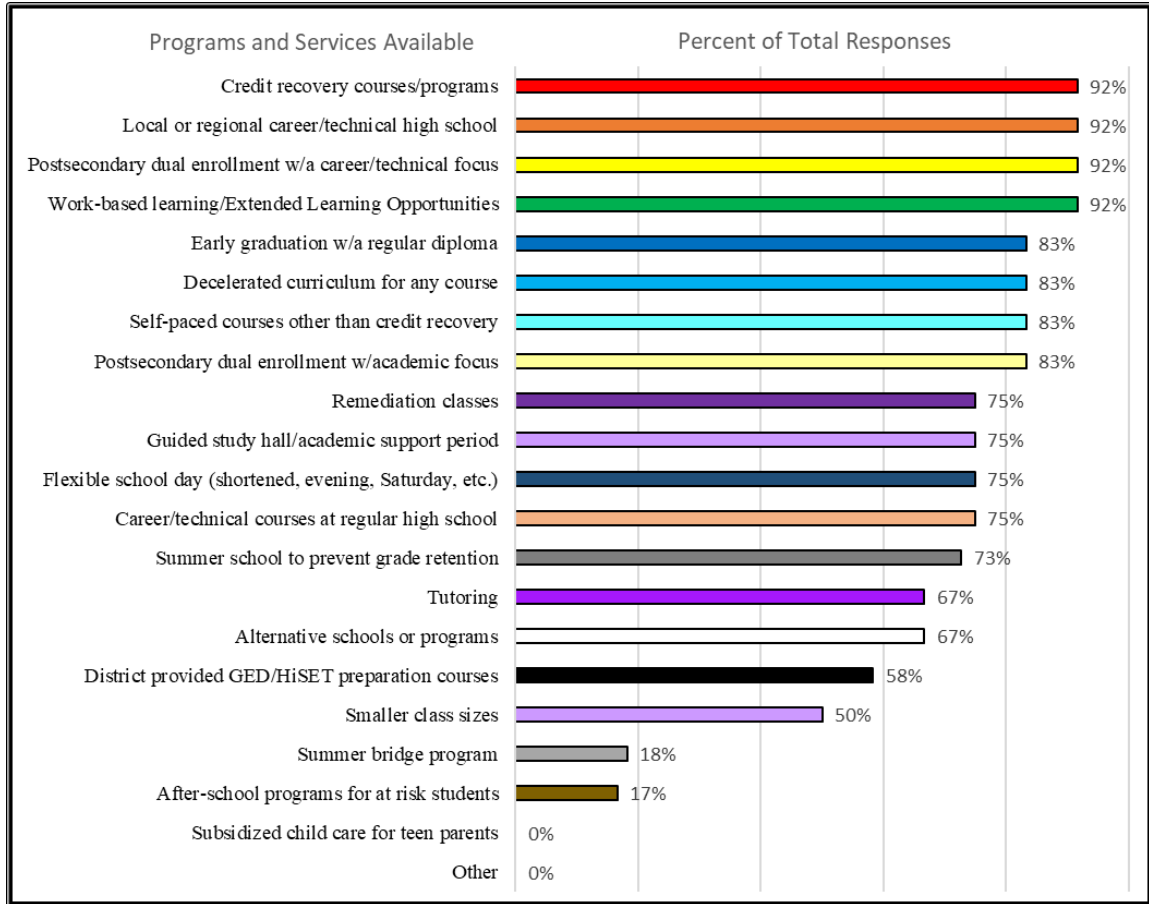
Survey participants clicked through a consent form, and answered sixteen questions about dropout prevention services and programs in their school district. The number of responses to each survey question ranged from 9 to 12. Frequency tables created by Qualtrics were useful in analyzing the prevalence and itemization of services, programs, and indicators, however I frequently returned to the raw data to dig deeper into responses to determine what practices individual districts employ and how that varies. In order to extract the most meaning from survey responses, I grouped questions according to categories that fit together to elucidate a bigger picture about the nature of public-school dropout prevention practices.

The services and programs included in the NCES FRSS Dropout Prevention Services and Programs (2010), which I replicated in my Qualtrics survey, are considered by the National Center for Dropout Prevention to be many of the best practices in high school dropout prevention (Smink & Reimer, 2005); they epitomize the supports which have been found successful in helping at-risk students obtain a graduation credential. For each question, I included an open-ended other category where respondents could specify praxes not included as an answer choice on the original closed-ended survey.

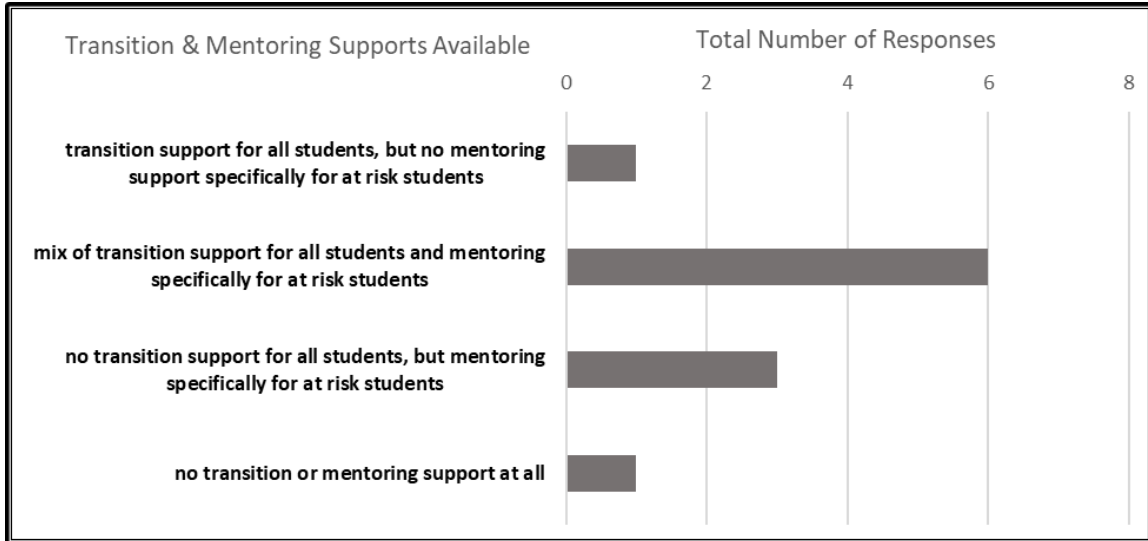
Figure 4.11 shows answers to the first four survey questions asked about services and programs available to students at risk of dropping out of schools in the participant's district. School districts reported that they provide a variety of dropout prevention services and programs. Top offerings were credit recovery, career and technical education, postsecondary dual enrollment, work-based extended learning opportunities, and flexibility in scheduling and pacing including accelerated, decelerated, and remedial courses. Fewer districts offered tutoring, alternative schools, or afterschool and summer programs.

Figure 4.11

Survey Q1-4: Services or Programs Available



Questions five through seven asked about supports for students transitioning between schools when entering middle and high school. Ninety-two percent of respondents reported that information about the unique needs of transitioning at-risk students is regularly provided to the receiving school. Figure 4.12 shows the transition and mentoring supports available to all middle and high school students, and also those specifically for at-risk students in participating school districts.

Figure 4.12*Survey Q5-7: Transition & Mentoring Supports*

In some school districts, transition or mentoring supports were available in either middle or high school, but not both; one school reported that they did not offer any of these supports at all. While schools used a combination of student, school staff, and volunteer community members as student mentors, none of the schools employed professional adult mentors whose only job is to mentor students.

Question eight inquired about formal programs designed to reduce behavioral problems, such as Positive Behavioral Intervention Systems (PBIS). Forty-five percent of participating districts reported offering behavioral supports in both middle and high school, while 27 percent offered this support at one level but not the other, and 27 percent did not offer any formal behavior support programs in either middle or high school.

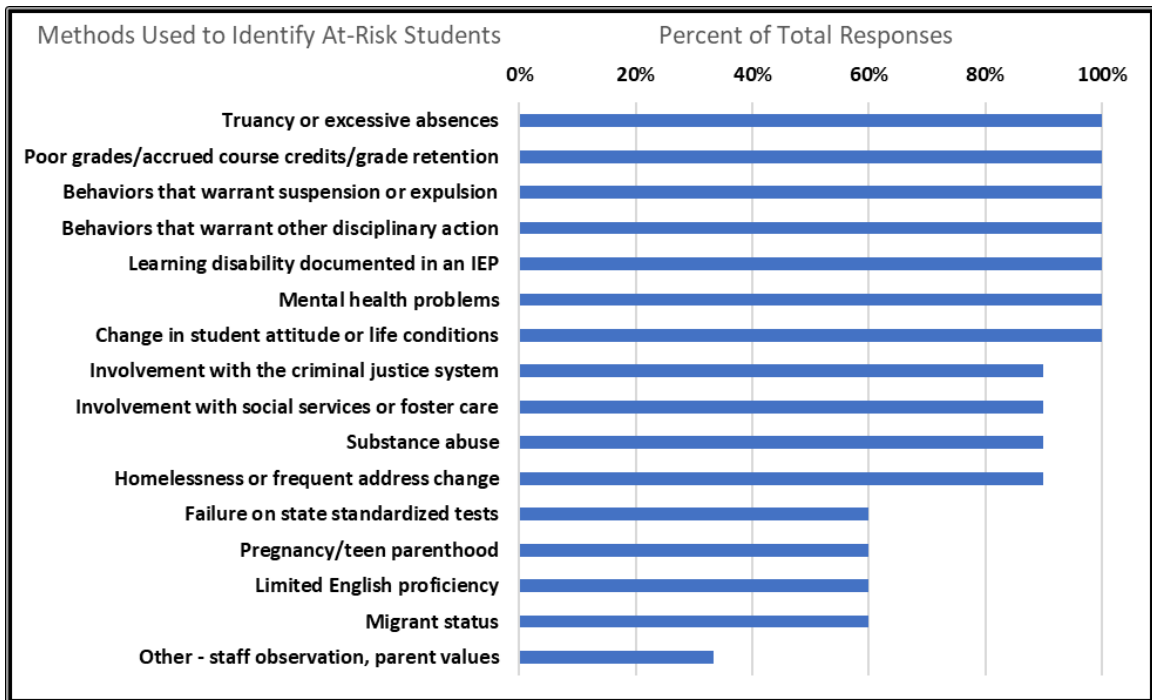
Questions nine and ten asked about which indicators school districts use to identify students at risk of dropping out. Nearly three quarters of respondents reported that their district does not use a standardized method to detect at risk students.

Nevertheless, most school districts employ a variety of indicators to discover which students may be moving toward dropping out, as displayed in Figure 4.13.

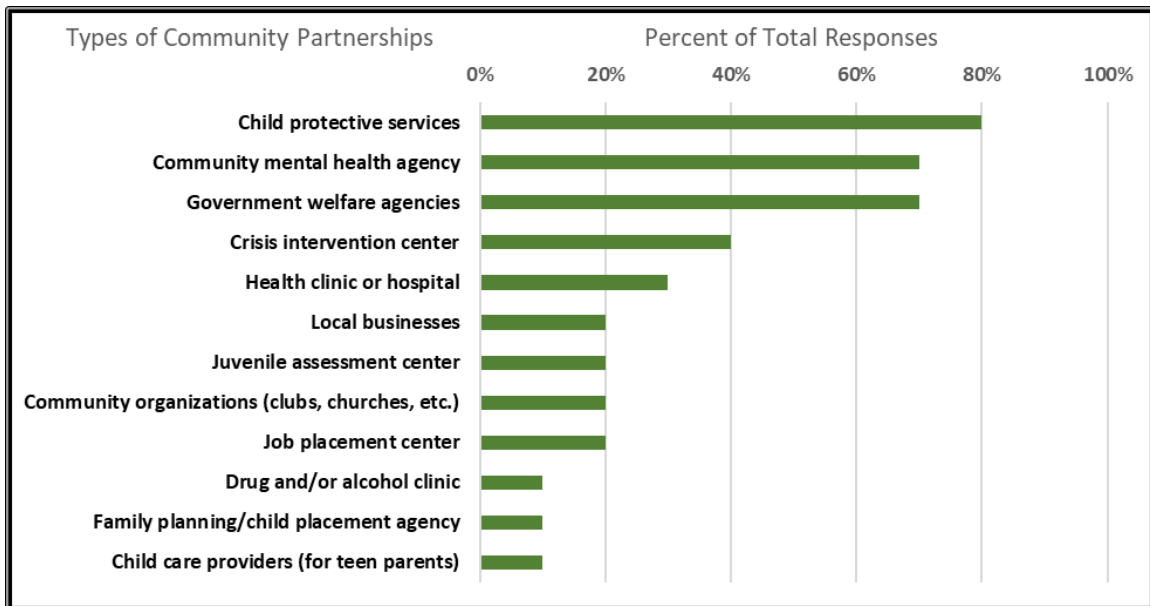
All of the responding schools reported using attendance/truancy, behavioral problems, identified learning disabilities, mental health, and student observations to identify students who may be at risk of dropping out of school.

Figure 4.13

Survey Q9-10: Identifying At-Risk Students



Responses to question eleven regarding school/community partnerships to mitigate drop out, shown in Figure 4.14, revealed that participating school districts engage most frequently with child protective services, mental health and government welfare agencies, and least often with substance abuse clinics and family planning or childcare providers. Two respondents reported that their school district does not engage in any community partnerships.

Figure 4.14*Survey Q11: Community Partnerships*

Questions twelve and thirteen asked about information school districts provide to students who appear highly likely to drop out. Only two school districts reported that they inform all impending dropouts about the employment and financial consequences of dropping out, along with the full range of job training, alternative school, alternative graduation credential, and adult education programs available to them. Most participating school districts reported that they provide some information to all students, but one district provides information about available opportunities only to some students.

School district follow up with students who either dropped out during the school year or failed to return to school as expected in the fall was addressed in questions fourteen and fifteen. Although 60 percent of school districts reported that they attempt to follow up with both groups, 30 percent only try to determine the status of students who did not return to school as expected but do not follow up with students who dropped out

during the school year. One traditional school district reported that they do not follow up with either of these groups of students.

Finally, question sixteen inquired about indicators used by school districts to determine whether to implement additional district-wide dropout prevention efforts. All of the respondents to this question reported using attendance records as a tool to make this determination, and one district reported using *only* attendance records for this purpose. Most school districts reported using a variety of measures to decide when dropout prevention services need increased attention. Only one district used state standardized test scores as a decision-making tool.

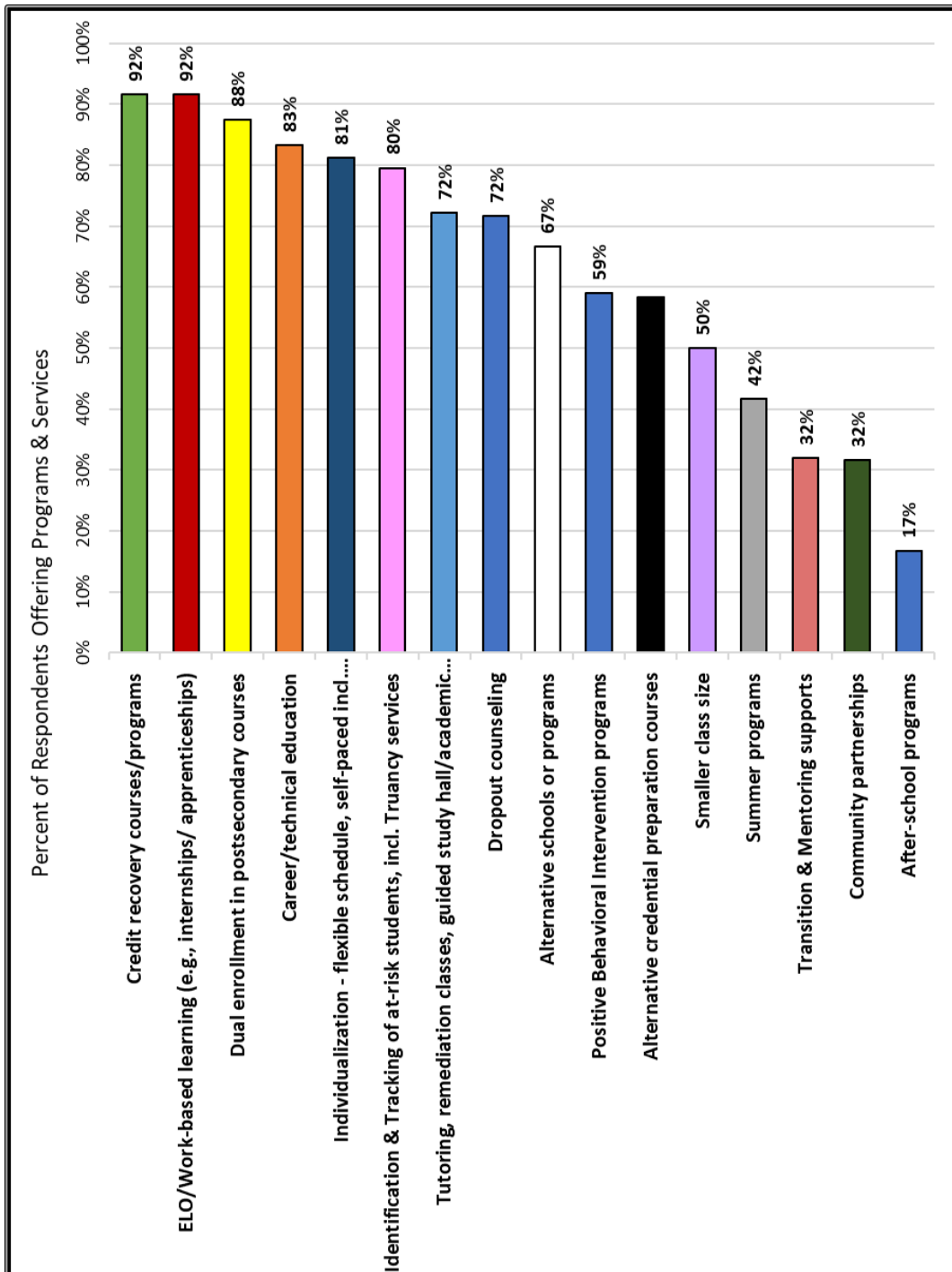
I used concept mapping techniques to combine FRSS survey categories with my program theory codes of legislative intent for the SB18(2007) policy change to allow broader concepts to emerge from the data in order to determine an implementation theory of dropout prevention practices used in New Hampshire public high schools. In a synthesis of all survey questions, Figure 4.15 displays the percentage of school district survey respondents who engage in each practice.

More than three-quarters of participating school districts appear to be heavily invested in identification and tracking of students at-risk of dropping out, and also offer a variety of alternative program options which allow those students to personalize their educational experiences. Top practices included credit recovery, extended learning opportunities, postsecondary dual enrollment, and career and technical education. This model shows between half and three-quarters of school districts providing formal behavior intervention programs, tutoring and remediation, dropout counseling, and preparation classes for alternative graduation credential exams. Fewer school districts

report offering transition or mentoring supports, community partnerships, and summer or after school programs to address dropout.

Figure 4.15

Implementation Theory: Survey Synthesis – School Practices in Dropout Prevention

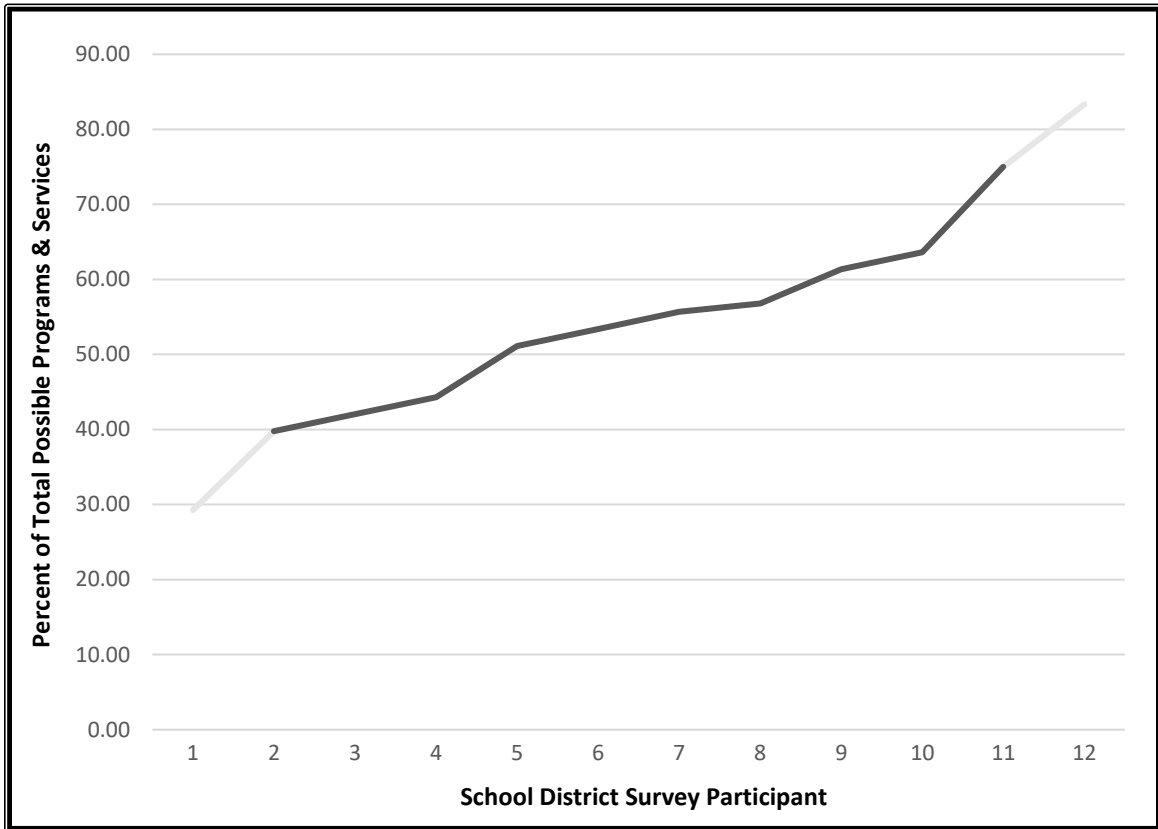


Boudah (2011) explains that examining the degree of consistency of a program's implementation can help us to verify that the outcome is related to the treatment. In order to evaluate the level of services offered by each participating school, I calculated a percentage rating of "yes" survey answers based on the total possible number of "yes" answers. I first assigned all of the yes answers a score of 1, and all of the no answers a 0. In the case of non-responses to answer choices, if the survey participant had answered the rest of the question but left a particular choice "blank" I assigned it a 0; if it was apparent that the participant had ceased their survey participation, I stopped counting and totaled their possible answers with their last question answered. Of the ten participants who finished the survey, the number of "yes" answers for program and service offerings ranged from 35 to 66 out of 88 total possible "yes" responses, or forty to seventy-five percent (Table 4.11 & Figure 4.16).

Table 4.11

Measured Programs & Services Offered per School District

Survey Participant/ School District	Total Yes Answers	Percent of Total Possible Yes Answers
1	12	29.27%
2	35	39.77%
3	37	42.05%
4	39	44.32%
5	45	51.14%
6	47	53.41%
7	49	55.68%
8	50	56.82%
9	54	61.36%
10	56	63.64%
11	66	75.00%
12	20	83.33%

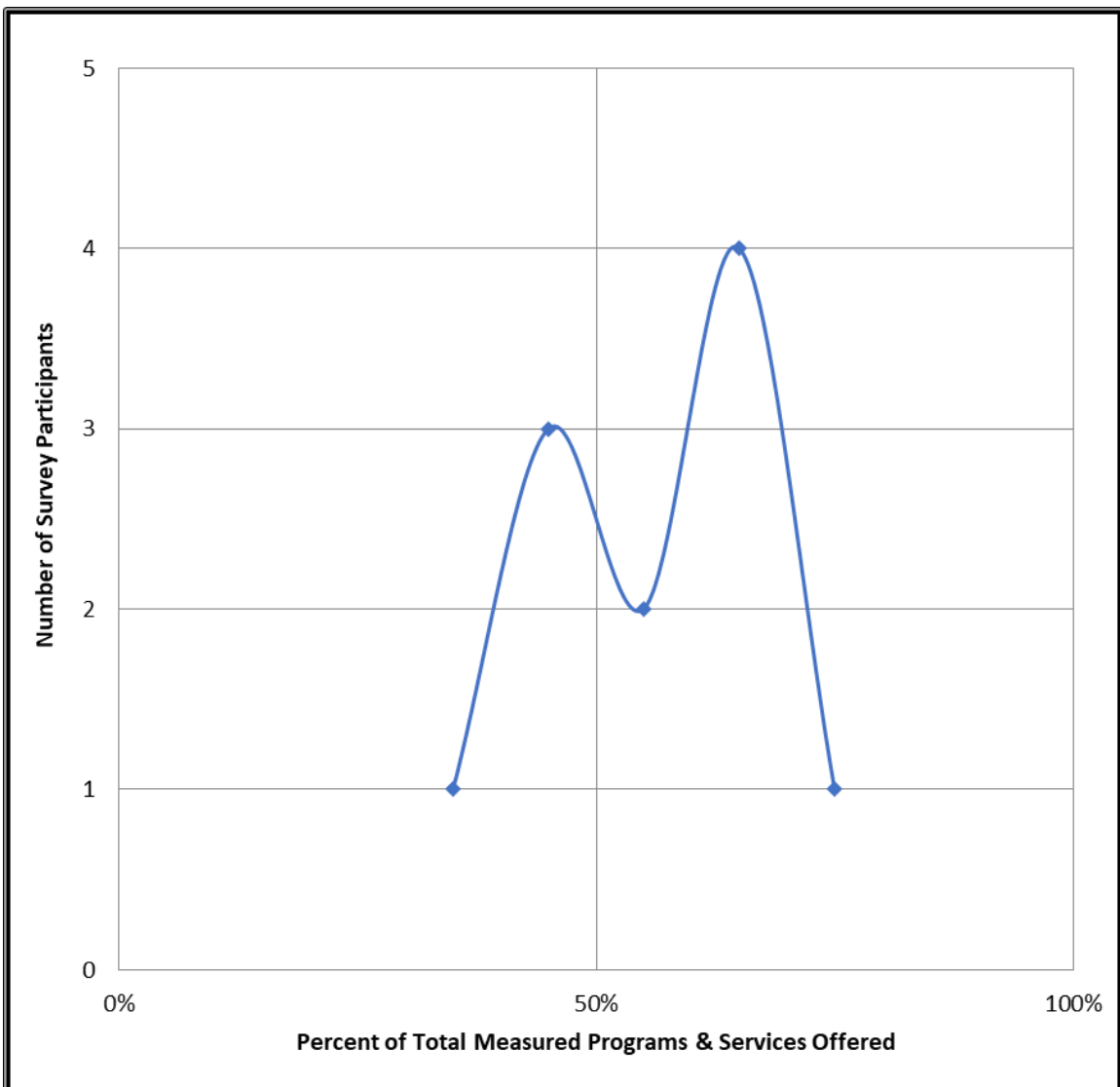
Figure 4.16*Measured Programs & Services Offered per School District*

Although sponsors and supporters of the bill had hoped it would force “us” to better meet the educational needs of students, it appears that there are still some holdout school districts in terms of utilizing best practices in dropout prevention. Approximately thirty percent of school districts appear to be going above and beyond in many implementation categories, particularly in terms of the number of alternatives offered, positive behavioral supports, investment in identification and tracking, and dropout counseling. However, around thirty percent seem to be lagging behind, especially with regard to transition and mentoring, engaging in community partnerships, following up with students who have left school, and monitoring their own need for increased dropout

prevention efforts. It is important to note that these numbers do not tell the whole story. In some categories of programs and services, a few school districts are offering most of the choices while others are offering very few (Figure 4.17). Unfortunately, the small number of respondents calls into question the validity of these survey results.

Figure 4.17

Distribution of Measured Programs & Services Offered per School District



A Theory of Change

In order to compare my program theory of legislative intent for the SB18(2007) policy change with my implementation theory of dropout prevention practices used by districts, which may have influenced the observed dropout and completion figures of New Hampshire high students, I aligned program theory codes with their corresponding survey answer choices from the FRSS survey. Figure 4.18 presents legislative intentions for the bill alongside dropout prevention practices currently being implemented by high schools as a percentage of the total number of coded instances for each group.

It appears at first glance that the amount of individualization available to students may not have reached the levels that sponsors were expecting, although it could be argued that the purpose of the wide variety of extended learning opportunity, career and technical education, post-secondary dual-enrollment, and other alternative educational options is meant to personalize an individual's education. I refined categories into broader groups, as presented in Figure 4.19, in order to gain a better perspective for how dropout prevention practices currently in use by school districts compare to policymakers' intentions for SB18(2007).

Figure 4.18

SB18(2007) Theory of Change: Convergence of Program & Implementation Theories

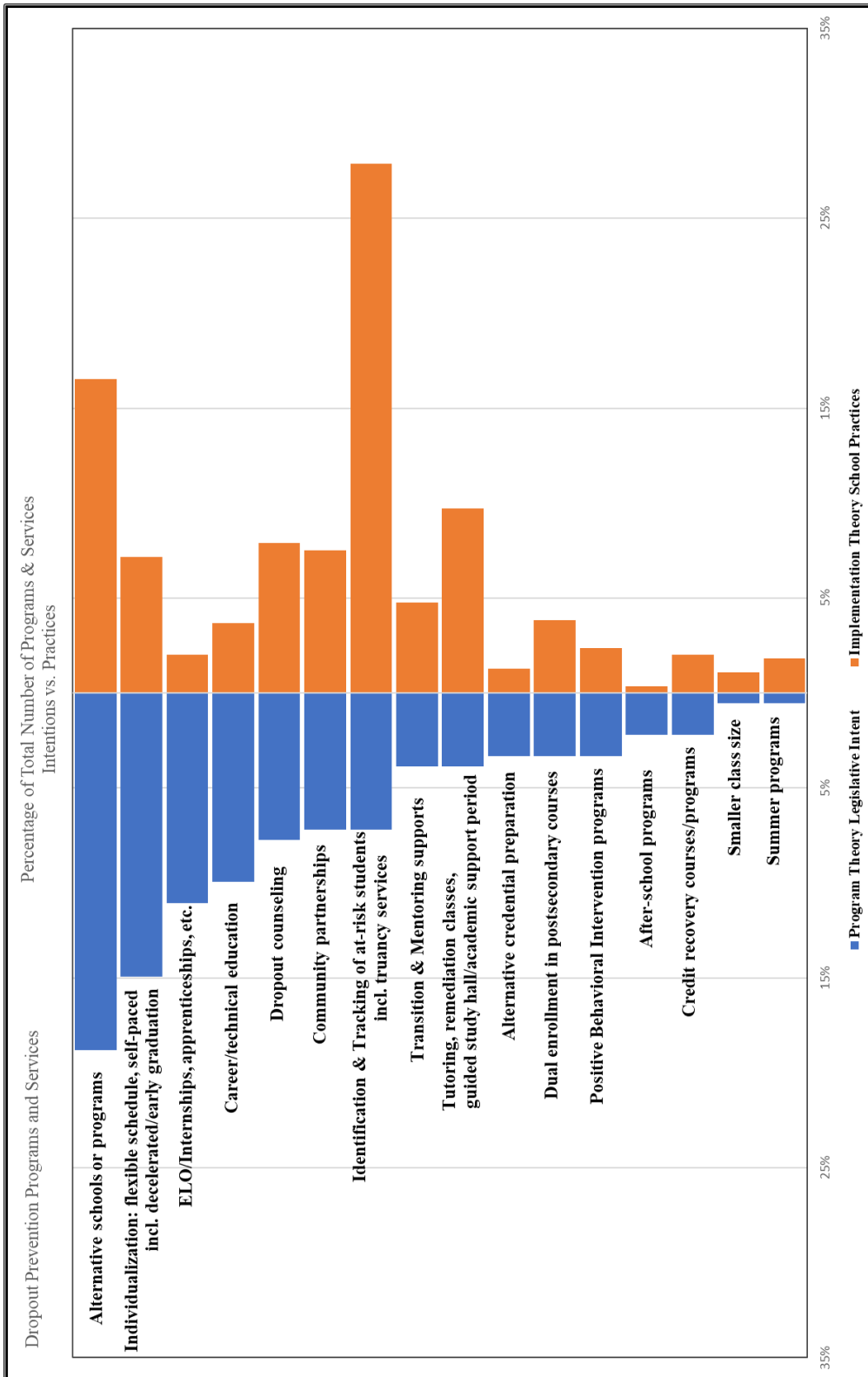
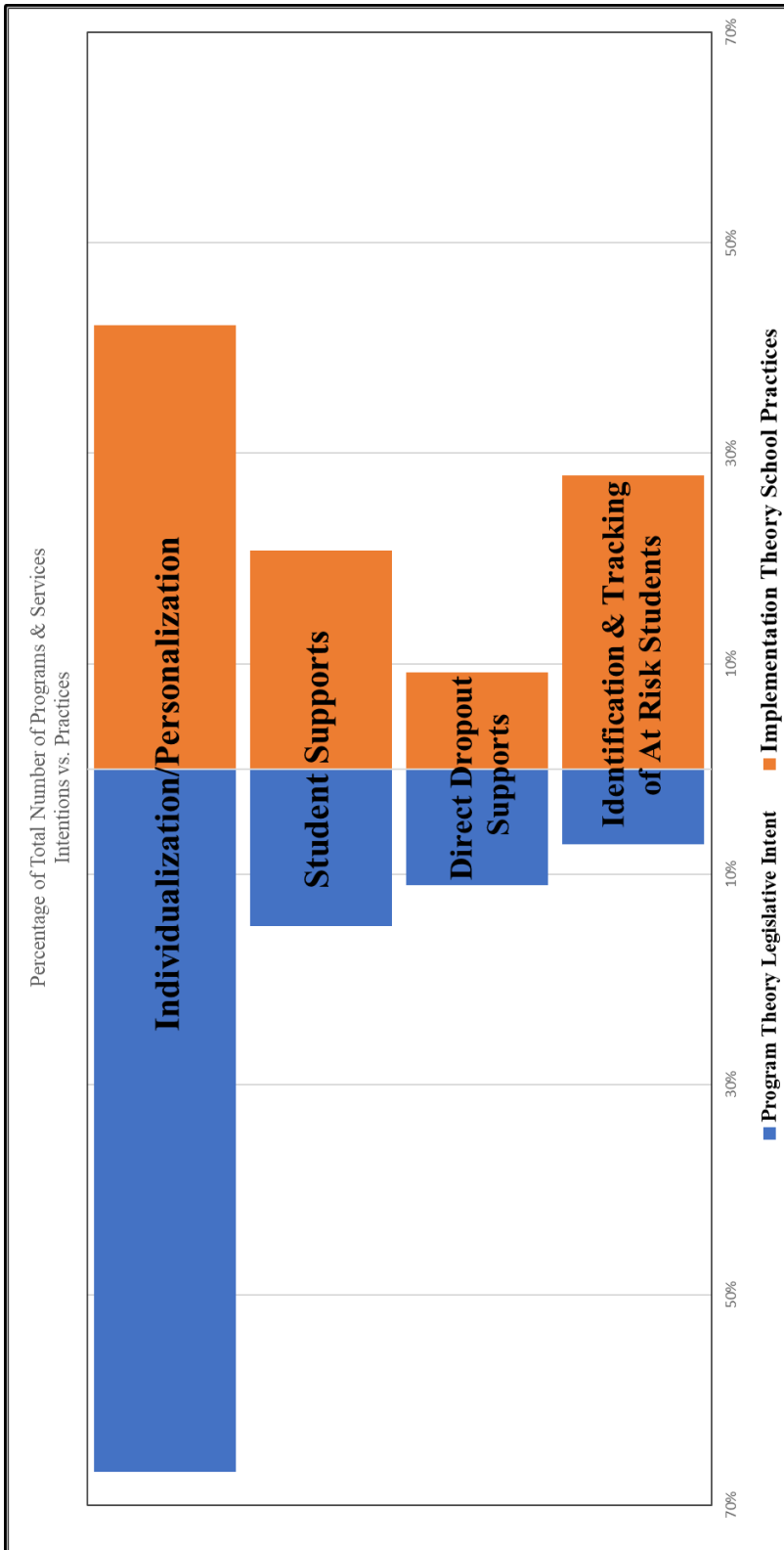


Figure 4.19

SB18(2007) Integrated Theory of Change



It looks as if school districts have exceeded policymakers' expectations when it comes to identifying and tracking students at risk of dropping out. Dropout counseling and preparation for alternative graduation credentials were consolidated into the larger category of direct dropout supports, the practice of which seems to align with legislative intent. I combined transition and mentoring supports, positive behavioral intervention programs, smaller class sizes, and community partnerships into the broader category of supports which can benefit all students; the levels of student supports being offered by survey respondents also appear to align well with the expectations of policymakers. The top theme for the SB18(2007) theory of change is educational individualization; this emerged as the biggest goal, in practice, of the policy change, and includes all of the various programs which allow for personalization.

If I were confident in the validity of my findings, I would posit that Figure 4.19 is a pretty accurate representation of the extent to which public schools in New Hampshire still need to implement personalization for at-risk students in order to meet the full promise of SB18(2007). Frequently, we find that praxes which are successful in meeting the special needs of marginal groups wind up becoming best practices for everyone. Indeed, the state has maintained a push toward personalized, competency-based learning not only for students at risk of dropping out of high school, but for all learners (NH Department of Education, 2019; NH School Administrators Association, 2023). Alternative learning plans prescribed by SB18(2007) seem to provide the flexibility needed for at-risk students to obtain a graduation credential should they choose to do so, yet whether or not each student has access to the program that would work best for them is not a settled point given differences in the programs that are available from one district

to another. For example, while access to career and technical education and post-secondary dual enrollment has become *nearly* ubiquitous, there are still some students who do not have access to those programs, and even if they are available in theory transportation or funding are often lacking (NH Department of Education, 2023b).

Implications

Empirical evidence from my review of literature indicated that raising the compulsory school attendance age had mixed results and could lead to either increasing or decreasing dropout rates. But even with alternative learning plans to support the measure, it doesn't appear from this study that increasing the compulsory school attendance age in New Hampshire had much effect on dropout and completion rates; they were already improving before passage and implementation of SB18(2007), and continued to do so at analogous rates afterward. Then again, it is worth noting that the *actual* compulsory school attendance age *did not* change – it was 18 both before and after 2007. Whether or not it changed *in practice* is really the point. That SB18(2007) removed the parental right to sign students out at age 16 does not change the fact that oftentimes parents have little control over teens, particularly those who would drop out of high school in violation of the law. This is borne out by the fact that, even though the law compels minors to remain in school until they have obtained a graduation credential, students of an age within the purview of the compulsory school attendance law continue to drop out. At the very least, perhaps this policy change has kept at-risk students from hounding their parents for a signed dropout form.

On the other hand, changing the rules with regard to compulsory school attendance really does *send a message*, and not just to let students know the extreme importance of a graduation credential. SB18(2007) sent a message to lagging school districts forced by the policy to better meet the needs of students who would otherwise become dropouts. The bill doesn't just *allow* for more flexibility in personalizing educational plans for at-risk students, but it *compels* districts, which might otherwise throw up their metaphorical hands, to create alternative options for those students.

Nevertheless, the data are inconclusive about the relationship between alternative learning plans and improvements in dropout and completion rates in New Hampshire. The dropout situation was already improving before the implementation of SB18(2007)'s alternative learning plans, however school districts were already offering alternative programs and services before that time, too. A brief review of news media articles from the decade before passage of the bill, which I collected and skimmed as I was researching articles for my program theory, makes it clear that New Hampshire public schools were already engaging in dropout prevention practices before the policy change. So, it *is* possible that improvements in high school dropouts are related to alternative programs and services offered by school districts going back to a time before the focus of this study; I would need more data to attempt to make such a determination. Not having used an experimental approach, I cannot rule out other explanations for the trends observed in the data.

In fact, it is highly likely that other factors affected these phenomena before the bill was brought before the NH General Court, and even before the year 2001. The collection of raw data in the early 2000s was affected by improvements in the tracking and reporting of student data during the first years of the i4see database, which went online in 2001 and was refined in 2004 (Levesque, 2017; NH Department of Education, 2022). It is also conceivable that increased attention to the dropout problem in the late 1990s led to changes in the delivery of education, initiating the steady downward trend in high school dropout that is observed in the data. Indeed, that time period also saw the transition in New Hampshire from the seat-time-based Carnegie credit system to a competency-based system of education, beginning in 1998 and continuing through 2004 – well within the scope of time which could have launched the trends seen here (Frost, 2016).

The National Center for Dropout Prevention reported empirical evidence that multiple interventions offered in tandem produce a better outcome (Smink & Reimer, 2005). Because I had assured survey participants that their responses would be anonymous in order to encourage truthful responses, it is impossible for me to connect school district practices with their corresponding dropout and completion figures. Yet, a majority of school district respondents reported a variety of interventions for each category measured. Unfortunately, I do not have enough information to determine to what extent that plethora of services and programs played a role in the improvement of high school dropout and completion rates in their districts.

In a thought experiment on the validity of my findings, I posited the question: what would it look like if outlier survey participants were more valid than the findings of this study? The choices are: 1) A majority of school districts are providing poor levels of dropout prevention services, which seems unlikely given the overall apparent success of New Hampshire's dropout and completion rates, 2) A majority of school districts are providing a moderate amount of services with a few outliers providing higher or lower levels of services, as this study with its small number of survey participants finds, or 3) A majority of school districts are providing high levels of dropout prevention services, while a few districts providing a low level of services are responsible for a higher number of dropouts. This is certainly a plausible scenario, especially given the large number of small and medium sized schools in New Hampshire, and the relatively smaller number of large schools. It is important to note that using dropout rate percentages fails when comparing schools of differing sizes; for a small school, one or two dropouts per year could represent a 2 percent event dropout rate, while for a large school 2 percent could mean 30 students dropping out!

Excluding pandemic anomalies, we seem to be doing better over these 20+ years with students who make it to grade 12, whose dropout rate is now on par with the grade 9-11 event dropout rates which have stubbornly remained between two percentage points from their origin throughout this time period. Empirical evidence that earlier intervention is needed as a dropout prevention tactic seems to have found its way into the strategic plan for the future of education in the state (Smink & Reimer, 2005). The push over the past ten years toward personalization of education for all of New Hampshire's students indicates that the passage of the bill and its

prescription for alternative learning plans may have had a trickle-down effect of personalization into the mainstream classroom and lower grade levels (Frost, 2016; Houghton, 2018; Vander Els, 2017; Walser, 2021).

It appears that the state's change in alternative graduation credential provider from the GED to the HiSET had a larger effect than SB18(2007) on not only event high school completion rates, but also the number of adult alternative graduation credentials earners. The launch of charter and alternative schools also had an effect, acting not just as an alternative to public school programs for struggling students, but also as a sink to absorb high school noncompleters, thereby reducing the dropout statistics of their sending schools. While alternative school dropout figures are tied to their sponsoring school districts, the diffused nature of charter school enrollments impedes easily connecting dropouts to their schools of origin. Given the fact that, for at least 15 years, the number of students leaving high school without a graduation credential was less than or equal to the number of adult alternative credential earners, oftentimes by a large margin, a plausible case can be made that the number of uncredentialed citizens in New Hampshire is much lower than the dropout rate would suggest. While there may be empirical evidence that high school dropout is an urgent problem nationwide, that imperative doesn't play out in New Hampshire. Dropout and completion rates are nearly maxed out, and SB18(2007) does not seem to have had a measurable effect on the already positive trends of those measures.

Recommendations for Advocacy

I don't believe my results bear out the endorsement of strategies to nudge the dropout rate closer to zero. The statewide event dropout rate remains at only 1 to 2 percent of enrollments, and nearly all 12th graders complete school. It is wishful thinking that we might ever get to 100 percent completion rate – there are so many social and personal/human factors affecting students and their families that, in the absence of changes to broader social conditions, it is unrealistic to think educators can “save” everyone through high school programming. What I can say is, although raising the compulsory school attendance age and requiring alternative learning plans for would-be dropouts did not seem to help improve the number of high school early exiters, those measures did not seem to hurt either.

I am hopeful that personalized learning alternatives which meet the needs of diverse and varied learners will continue to be a focus of educators and administrators. Since the passage of SB18(2007), the state has continued to advance its push toward personalized, competency-based education through a high school redesign process. Education stakeholders have collaborated in the development of state competencies, creation of mastery-based assessments for the award of credit toward graduation, and expectations for the provision of personalized learning which cedes some control to students, giving them some of the autonomy over their own educational experience which is necessary for engagement in the educational process (Center for Innovation in Education, 2017; Kaput, 2017; NH Department of Education, 2023a, 2023d; NH Learning Initiative, 2023).

In 2021, the New Hampshire General Court wrote a dropout prevention program into state education statutes, to be administered by the state Department of Education, and is currently undertaking a revision of its administrative rules to further these goals (NH Department of Education, 2023c). I would refer leaders who are interested in dropout prevention and recovery to the National Dropout Prevention Center. I would recommend the International Society for Technology in Education publication *A Step by Step Guide to Personalize Learning* (2013) for more information about individualizing education.

Organization and Field Impacts

Patton (2002) warns that biases and alternative explanations for outcomes must be acknowledged. Complexity may make it difficult to establish a strong relationship between variables when conducting a policy evaluation, however Mertens and Wilson (2012) note that a chain of evidence can be established. An integrated mixed methods design, where quantitative and qualitative data are mixed or connected, enhances the validity, reliability, and usefulness of research findings (Stufflebeam, 2007). Theoretical grounding is a good way for leaders to hold themselves accountable, by removing bias through the use of objective measures; this is the exact reason for a theory of change design. Indeed, Weiss (1998) asserts that using a theory of change to compare theory-based expectations with observed data can provide some measure of validity even in the absence of statistical support.

Therefore, the criteria I used to gauge success of the policy change were policymakers' own words about what they hoped to accomplish with it. I believe this construct worked exceedingly well in allowing me to evaluate the SB18(2007) policy change to discover to what degree school district practices align with legislative intent. The problem lies in whether or not my results are valid due to a paucity of data, making it difficult to answer the question of whether or not SB18(2007) is efficacious as a policy change. I need more survey data responses in order to improve the validity of my analyses of school practices, and more years of student data to determine a relationship between alternative learning plans and observable outcomes of dropout and completion. Time constraints in the completion of this project did not allow me to perform member checking of my results as had been my intention, however feedback on my analysis from a high-level stakeholder in the New Hampshire dropout prevention field at the time SB18(2007) was passed was in agreement with my findings, providing some measure of confidence in their validity. Objective assessment of the quality of my research given by dissertation committee members acts as a de facto external audit.

While it appears that many school districts have made a valiant attempt of living up to the promise of SB18(2007), it is concerning that 15-years after the bill's passage some schools still do not offer much in the way of dropout prevention practices. Taken at face value, my data suggests that some school districts are shockingly blasé about providing services and programs for their at-risk students; in truth, it is a few schools who are lacking in multiple ways. An in-depth analysis of which schools present the highest number of dropouts, and which dropout prevention programs and services they offer, might be illuminating in this regard. Nevertheless, I prefer to assume that people

everywhere are doing the best they can, and that educators and administrators care about students. It is important to remember that the specter of “local control” in New Hampshire sometimes hampers the ability of policy and practice experts to institute proven solutions, and local budgets are always a major driver of local school district programs and services in a state without a broad-based tax structure.

In some ways, a dropout prevention survey is like a push-poll; in asking school districts whether they use these specific best-practices in dropout prevention, we are essentially reminding them of successful praxes which they might now decide to employ. Seeing what other districts in New Hampshire are doing may also help lagging school districts, so they can better gauge their own efforts. Pointing out what works, and what does not, helps stakeholders make better-informed decisions in the future. Even if high school noncompletion is not a pressing issue in New Hampshire, the results of my study could be useful to policymakers in other states.

Reflective Summary

My biggest technical challenges in completing this study were a lack of data with both an incomplete dataset from the Department of Education and a small survey response rate. If I could have done things differently, I would have sent survey invitation emails directly to dropout prevention specialists in an attempt to obtain more responses. A delay in my IRB process carried over into my data collection period, which meant that my survey went out much later than anticipated; unfortunately, my data collection window happened during two school vacation periods. I would also like to have pursued older dropout and completion data from the Department of Education in an attempt to determine at what point high school dropout rates began the downward trend

that was observed in this study. Unfortunately, data recordkeeping was not standardized in New Hampshire prior to 2001, so there remains a question of whether quality data exists. I wish that I had been able to interview dropout prevention specialists to gain deeper insight into what types of alternative services and programs work best in their districts, which would have provided another data point for validating my results.

Finally, I would like to conduct more member-checking with the bill's sponsors about my findings and the evolution of this issue.

Because this dissertation was focused on educational aspects of the SB18(2007) policy change, I did not examine how it might have affected the social consequences of dropout; such an inquiry would be limited by the difficulty in controlling other factors that influence those measures. Improvements in student performance in areas such as the number of students taking AP courses, going to college, or leaving high school ready for work were mentioned as reasons some policymakers supported SB18(2007), but as they are not directly related to compulsory school attendance or alternative learning plans, I did not include them in this research project. These could be areas of future research. If comparable data exists for another New England State, a comparison group could lend itself to more powerful statistical tests.

Boudah (2011) maintains that each researcher is an instrument in their own right, bringing experience and philosophical preconceptions to the study that can be regarded as a lens; this theoretical sensitivity can either focus on the researcher's biases, or contribute to insight and understanding of the phenomenon. At the time SB18(2007) was going through the legislative process, I reasoned that legislators would not need to raise the compulsory school attendance age if they adopted only the alternative learning plans

– students would have no need to drop out if their needs were met. But now that I have examined the policy change through the theory of change process, I can see how the bill was only a small piece of a larger strategic plan to meet student needs through personalizing public education.

Having focused our doctoral lens on Vygotsky’s theory of social constructivism before entering into an examination of the power of language to bring about positive social change through policy-setting, it is very apparent that words matter. Legislative language is picky in an attempt to catch-up as many instances of a phenomenon in the change which policymakers are trying to create, while at the same time leaving enough ambiguity for freedom to solve uncommon and unforeseen circumstances. The compulsory school attendance message was not meant for students, but for school leaders entrenched in the old seat-time system. Alternative learning plans were a rudder to steer budget-writers, who choose the direction of government services based on what they fund. But hindsight is 20/20, and I have the benefit now of 15 more years of state level policy progress with which to view SB18(2007). My biggest takeaway from this study is a confirmation that things aren’t always what they seem. Public education is complicated, and politics is a long-term strategy game. Social change is slow and incremental.

In the Plymouth State University Doctoral Program, I learned that the foundation of leadership is relationship. I think it possible that a factor in my low survey response rate could be my lack of relationship with the community I was surveying – they don’t know me, so why should they care about my project? Without knowing my intentions and character, they may also have perceived my

curiosity as a judgement or indictment against their work – like I was prying because wanted to find a problem that would convict them, when in reality I recognize how hard they are working to do their difficult jobs with limited resources, and I would only like to find a way to support that work through calling attention to successful elements so that they can be replicated, to make their colleagues’ jobs easier, and to provide more opportunities for students. So, I need to develop relationships. And yet I worry that I may continue to encounter similar difficulties because my lack of public-school experience makes me an outsider; my effort and contribution to knowledge will be discounted, and my expertise in personalized learning will never be accepted until I have worked in the schools.

Along those lines, it is fascinating to me how education policymakers neither consulted nor sought buy-in from veteran home educators, who are experts in the delivery of personalized education, during the long-term progression toward individualizing public education. Many of these parents made the decision to educate their children at home precisely *because* of their child’s need for personalization. If policymakers had engaged the home education community regarding the continuing goal of personalizing public education, instead of opposition they could have had allies in the passage of SB18. One of the core lessons I take away from the Plymouth Ed.D. program is the necessity of involving, consulting, or attempting to gain consensus from *all* stakeholders when enacting changes.

My interest in personalized education was the foundation of my passion about education and policy as I advanced through two master's degrees and this doctorate at Plymouth. I would like to see each student in the United States with a personalized learning plan, and I plan to continue working for that cause. Regardless, I believe that overcoming personal challenges as I progressed through my dissertation process resulted in personal growth that is more valuable even than the academic growth I have achieved.

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Appendices

Appendix A. IRB Approval**Institutional Review Board**

Date November 29, 2022

Dear Amy Gall

Study: Assessment of the Impact of Senate Bill 18(2007) on Dropout Prevention Programs in New Hampshire: A Survey of Specialists About Their Programs

Approval Date: November 29, 2022

The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved the protocol for your study as Exempt as described in Title 45, Code of Federal Regulations (CFR), Part 46, Subsection 101(b). Approval is granted to conduct your study as described in your protocol. Be sure to complete the Final Report Form when your research is finished.

If, during the course of your project you intend to make changes that may significantly affect the human subjects involved (particularly methodological changes), you must obtain IRB approval prior to implementing these changes. Any unanticipated problems related to your use of human subjects must be promptly reported to the IRB. The IRB may be contacted through Dr. Clarissa M. Palmer, Chair of the IRB. This is required so that the IRB can update or revise protective measures for human subjects as may be necessary.

You are expected to maintain as an essential part of your project records, any records pertaining to the use of humans as subjects in your research. This includes any information or materials conveyed to and received from the subjects as well as any executed forms, data and analysis results. If this is a funded project (federal, state, private, other organization), you should be aware that these records are subject to inspection and review by authorized representatives of the University, State of New Hampshire, and/or the federal government.

Please note that IRB approval cannot exceed one year. If you expect your project to continue beyond this approval period, you must submit a request for continuance to the IRB for renewal of IRB approval. IRB approval must be obtained and maintained for the entire term of your project or award.

Please notify the IRB in writing when the project is completed. We may ask that you provide information regarding your experiences with human subjects and with the IRB review process. Upon notification, we will close our files pertaining to your project. Any subsequent reactivation of the project will require a new IRB application. I have attached the Project Completion Form for your convenience.

Please do not hesitate to contact the IRB if you have any questions or require assistance. We will be happy to assist you in any way we can. Thank you for your cooperation and efforts throughout this review process. We wish you success in this endeavor.

Sincerely,

A handwritten signature in black ink, appearing to read "Clarissa M. Palmer", on a light-colored background.

Clarissa M. Palmer, PhD
Institutional Review Board
Psu-irb@plymouth.edu

Appendix B. Survey Questions

By omitting questions that require the submission of personally identifiable information about the participant or their school in order to provide anonymity of survey responses, this survey was adapted from the

U.S. Department of Education

National Center for Education Statistics

Dropout Prevention Services and Programs

Fast Response Survey System 99

O.M.B No.: 1850-0733

which is held in the public domain and available for use without NCES permission.

This survey focuses on dropout prevention services and programs in your district.

By dropout prevention services and programs, we mean those that are intended to increase the rate at which students are staying in school, progressing toward graduation, or earning a high school credential.

Please answer the following survey questions about dropout prevention services or programs offered by your school or by any of the schools in your district in the current school year.

The survey is designed to be completed by the person or persons most knowledgeable about dropout prevention services and programs in your school district. Please consult with others who can help provide the requested information.

Definitions

<p>An advisement class is one that is held regularly (e.g., weekly) and may include lessons on organizational and study skills, information on courses needed for graduation, and information about careers and college preparation.</p> <p>Alternative schools and programs are designed to address the needs of students that typically cannot be met in regular schools. The students who attend alternative schools and programs are typically at risk of educational failure (as indicated by poor grades, truancy, disruptive behavior, pregnancy, or similar factors associated with temporary or permanent withdrawal from school).</p> <p>Career/technical high schools are those that provide formal preparation for semiskilled, skilled, technical, or professional occupations. For purposes of this survey, please include career/technical high schools that are available to students in your district and are administered either by your district or by a regional entity.</p> <p>Credit recovery courses/programs are opportunities allowing students to recover course credits from classes they have missed or failed.</p> <p>Decelerated curriculum refers to a curriculum that is spread over a longer period of time than a regular course. An example of a decelerated curriculum is an algebra 1 course that is spread over 2 years or two class periods for an entire year. This definition applies to any curriculum that is decelerated specifically to meet the needs of students who may be at risk of failing a course.</p> <p>Electronic warning system is an electronic database used to identify students who may be at risk of dropping out. The system includes multiple pieces of student information, such as attendance, grades, and behavioral referrals, one or more of which may be used to identify at-risk students.</p> <p>Formal program to reduce behavioral problems refers to a systematic program that is specifically designed to reduce behavioral problems and is implemented at the classroom or school level.</p> <p>Guided study hall/academic support period is typically for students who are struggling academically; teachers assist students by helping them manage their time and their assignments, and either provide or get them the academic support/tutoring that they need to complete homework and be successful in their classes. Teachers may also provide academic support in specific academic areas such as math, reading, or social studies.</p> <p>Students who are highly likely to drop out of school may include those with multiple risk factors, such as many unexcused absences, academic failure, or reoccurring behavior that warrants suspension or expulsion, or those who provide other strong indications that they are dropping out.</p> <p>Job training and GED combination programs are programs that combine both job training and GED preparation courses. This includes programs such as Job Corps or the Army/National Guard GED program or other similar programs.</p> <p>Job training programs are those that provide formal preparation for semiskilled, skilled, or technical occupations. These programs do not include GED preparation or result in a high school diploma.</p> <p>Juvenile Assessment Center is a centralized receiving, processing, and intervention facility that brings together community services for youth and families who have, or are likely to have, contact with the legal system.</p> <p>A remediation class is any class intended to bring students who are academically below grade level up to proficiency.</p> <p>Self-paced courses/independent study are opportunities for students to work through a course at their own pace, for example, through a computer-based program or packets of work.</p> <p>Summer bridge programs are programs designed to provide assistance to students before transitioning from one instructional level school to another (e.g., from middle school to high school). These programs may include, but are not limited to, providing academic support, remedial opportunities, study skills, and opportunities to connect to teachers or peers at the new school.</p>

Definitions are provided on the instructions and definitions page for all items marked with an asterisk (*).

1. Are any of the following services or programs offered specifically to address the needs of students at risk of dropping out of school in any of the schools in your district? *(Circle one on each line for each instructional level.)*

Service/program	Instructional levels					
	Elementary school		Middle/junior high school		High school	
	Yes	No	Yes	No	Yes	No
a. Tutoring	1	2	1	2	1	2
b. Summer school to prevent grade retention	1	2	1	2	1	2
c. *Remediation classes	1	2	1	2	1	2
d. *Guided study hall/academic support period	1	2	1	2	1	2
e. *Alternative schools or programs	1	2	1	2	1	2
f. After-school programs specifically to address the needs of students at risk of dropping out.....	1	2	1	2	1	2

2. Are any of the following services or programs offered specifically to address the needs of students at risk of dropping out of school in any of the schools in your district? *(Circle one on each line.)*

	Yes	No
a. District-administered General Education Development (GED) preparation courses	1	2
b. Early graduation options for earning a regular diploma	1	2
c. *Decelerated curriculum for any course (e.g., algebra 1 extended over 2 years or 2 class periods) .	1	2
d. *Credit recovery courses/programs	1	2
e. *Self-paced courses (e.g., computer or packet based) for purposes other than credit recovery	1	2
f. Smaller class size	1	2
g. Flexible school day (e.g., shortened school day, evening classes, or Saturday classes)	1	2
h. *Summer bridge program	1	2

3. Please indicate in part 1 whether the following educational options are available to students in your district. For each option you mark as available, please indicate in part 2 how many students at risk of dropping out participate.

Educational option	1. Available in your district?		2. If available, how many students at risk of dropping out participate?		
	Yes	No	No or few at-risk students participate	Some at-risk students participate	Most at-risk students participate
a. *Career/technical high school (including regional career/technical high schools)	1	2	1	2	3
b. Career/technical courses at a regular high school	1	2	1	2	3
c. Dual enrollment in postsecondary courses with a career/technical focus	1	2	1	2	3
d. Dual enrollment in postsecondary courses with an academic focus (e.g., English, math, foreign languages) .	1	2	1	2	3
e. Work-based learning (e.g., internships/apprenticeships) ..	1	2	1	2	3

4. Does your district provide or subsidize child care while teen parents are attending classes? *(Circle one.)*
 Yes 1 No 2

5. When a student who is at risk of dropping out is transitioning from a school at one instructional level to a school at a higher instructional level (e.g., from middle school to high school), is information regularly provided to the receiving school about the unique needs of that student? *(Circle one.)*
 Yes 1 No 2

6. Are the following supports used in any of the schools in your district to help students transition from a school of one instructional level to a school at a higher instructional level (e.g., from middle school to high school)? (Circle one on each line for each transition.)

Transition support for all students	Transition			
	Elementary to middle/junior high school		Middle/junior high school to high school	
	Yes	No	Yes	No
a. Assign all students a student mentor upon entry into the new school	1	2	1	2
b. Assign all students an adult mentor upon entry into the new school	1	2	1	2
c. Offer an advisement class* for all students during the first year at the new school	1	2	1	2

7. Are any of the following types of mentors used in any of the schools in your district specifically to address the needs of students at risk of dropping out? (Circle one on each line for each instructional level.)

Mentor	Instructional levels					
	Elementary school		Middle/junior high school		High school	
	Yes	No	Yes	No	Yes	No
a. Student mentors	1	2	1	2	1	2
b. School counselors, teachers, or school administrators who formally mentor students	1	2	1	2	1	2
c. Adult mentors employed by the district whose only job is to mentor students	1	2	1	2	1	2
d. Community volunteers (i.e., volunteers from churches, community organizations, businesses, etc.)	1	2	1	2	1	2

8. Do any of the schools in your district use a formal program designed to reduce behavioral problems* in schools or classrooms (e.g., Positive Behavioral Support, Positive Behavioral Intervention System, etc.)? (Circle one for each instructional level.)

	Yes	No
a. Elementary school	1	2
b. Middle/junior high school	1	2
c. High school	1	2

9. Does your district have a standardized method of identifying students who may be at risk of dropping out (e.g., a standardized checklist of at-risk behaviors or an electronic warning system*)? (Circle one.)

Yes 1 No 2

10. To what extent are the following factors used in your district to identify students who are at risk of dropping out? (Circle one on each line.)

Factor	Not at all	Small extent	Moderate extent	Large extent
a. Truancy or excessive absences	1	2	3	4
b. Academic failure indicated by grades, accrued course credits, or grade retention	1	2	3	4
c. Failure on state standardized tests	1	2	3	4
d. Behaviors that warrant suspension or expulsion	1	2	3	4
e. Behaviors that warrant other disciplinary action	1	2	3	4
f. Involvement with the criminal justice system	1	2	3	4
g. Involvement with social services or foster care	1	2	3	4
h. Pregnancy/teen parenthood	1	2	3	4
i. Substance abuse	1	2	3	4
j. Learning disability as indicated in an Individualized Education Plan (IEP)	1	2	3	4
k. Mental health problems	1	2	3	4
l. Observed change in student attitude or life conditions	1	2	3	4
m. Homelessness or frequent address change	1	2	3	4
n. Limited English proficiency	1	2	3	4
o. Migrant status	1	2	3	4
p. Other (specify)	1	2	3	4

11. Does your district work with any of the following to address the needs of students at risk of dropping out? (Circle one on each line.)

	Yes	No
a. Child protective services	1	2
b. Local businesses	1	2
c. *Juvenile assessment center	1	2
d. Community mental health agency	1	2
e. Churches or community organizations (e.g., Boys & Girls Clubs, United Way, Lion's Clubs)	1	2
f. Job placement center	1	2
g. Crisis intervention center	1	2
h. Drug and/or alcohol clinic	1	2
i. Family planning/child placement agency	1	2
j. Child care centers/providers (i.e., for children of teen parents)	1	2
k. Health clinic or hospital	1	2
l. State or local government agencies that provide financial assistance to needy families	1	2
m. Other(specify)	1	2

12. When students appear highly likely to drop out of school,* does your district provide information about the employment or financial consequences of dropping out of school? (Circle one.)

Yes, this is standard procedure with all students highly likely to drop out	1
Yes, with some students	2
No	3

13. When students appear highly likely to drop out of school,* does your district provide information about the following education and training options? (Circle one on each line.)

Education and training option	Yes, this is standard procedure with all students highly likely to drop out	Yes, with some students	No
a. *Alternative schools or programs administered by your district or another entity	1	2	3
b. *Job training/GED combination programs (e.g., Job Corps)	1	2	3
c. GED or adult education programs	1	2	3
d. *Job training programs	1	2	3

14. Does your district try to determine the status of students who were expected to return to school in the fall but who do not return as expected? (Circle one.)

Yes, for all students	1
Yes, for some students	2
No	3

15. When students drop out during the school year, does your district follow up with those students sometime before the next school year to encourage them to return? (Circle one.)

Yes, for all students who drop out	1
Yes, for some students who drop out	2
No	3

16. Does your district use any of the following information to determine whether to implement additional district-wide dropout prevention efforts? (Circle one on each line.)

	Yes	No
a. Dropout rates	1	2
b. Graduation rates	1	2
c. Attendance rates	1	2
d. Number of expulsions or other disciplinary actions	1	2
e. State standardized test scores	1	2
f. Number of students attending adult education/GED program	1	2
g. Number of students taking or passing the GED test	1	2
h. Number or percentage of students failing courses or held back	1	2
i. Feedback from a district-administered parent or student survey	1	2
j. Other(specify)	1	2

Appendix C. Invitation Email

Greetings,

My name is Amy Gall. I am emailing you as a doctoral candidate of Plymouth State University's Doctor of Education program. My purpose in contacting you is to request that you **forward this email to your school's Dropout Prevention, At-Risk School Coordinator, or staff member most knowledgeable about your school's dropout prevention practices** so that they may consider participating in my research study focusing on the effectiveness of New Hampshire's dropout prevention policy change, SB18(2007).

I would be grateful for your participation in my research project, which entails responding to an online Dropout Prevention Services and Programs Survey, developed by the National Center for Education Statistics that should take approximately 20 minutes to complete. Your participation in this study will remain confidential, and your responses will be anonymized before they are made accessible to researchers.

Please review this **Informed Consent** form, which is an important part of the Institutional Review Board (IRB) process in any research investigation. The Informed Consent form provides information about the study, its risks and benefits, and your rights as a participant. Please print this document and retain a copy for your files. Feel free to contact me with any questions you may have regarding this research project.

Completion of the survey constitutes consent to participate in the study. As a token of appreciation for your time and effort, upon completion of the survey you will have the opportunity to enter into an optional raffle for one of two \$25 Amazon.com gift cards.

Each survey link can only be used to submit one survey. You can close your survey at any time and your progress will be saved so that you can return to complete it later. Follow this link on the digital device of your choice to access the online survey:

Take the Survey

The survey link will expire in 30 days, however it would be appreciated if you could complete this survey as soon as possible. Important research such as this depends upon your expertise and cooperation.

Thank you in advance,

Amy Gall, M.Ed., CAGS

Appendix D. Informed Consent

INFORMED CONSENT FORM

CONSENT TO PARTICIPATE

VOLUNTARILY IN A RESEARCH INVESTIGATION

PLYMOUTH STATE UNIVERSITY

INVESTIGATOR(S) NAME: Amy Gall

STUDY TITLE: Longitudinal Mixed Methods Doctoral Dissertation on the Efficacy of a New Hampshire Dropout Rate Policy Change Using a Theory of Change

PURPOSE OF THE STUDY

The purpose of this study is to examine the long-term effectiveness of New Hampshire's dropout prevention policy change, SB18(2007), by comparing the legislature's stated goals with the outcomes in terms of both dropout and graduation rates, and school practices.

This work is being undertaken as part of the Plymouth State University doctoral program.

You have been selected to be a participant in this study because of your expertise regarding practices in your school related to dropout prevention and at-risk student retention and support.

DESCRIPTION OF THE STUDY

This mixed-methods study will be conducted in three parts. The first part of this study will examine the New Hampshire legislative record and news media for evidence of policy-makers' intentions with the passage of NH SB18(2007). Next, the investigator will analyze New Hampshire high school enrollment, completion, and non-completion rates, particularly as regards passage and implementation of the law. Finally, responses collected from at-risk school coordinators using the Dropout Prevention Services and Programs Survey developed by the National Center for Education Statistics will be

compiled to determine what dropout prevention strategies are being used in New Hampshire schools. An examination of the alignment of dropout rates and school practices with the original intention of policymakers will reveal the efficacy of the policy change and allow the investigator to make recommendations for future action.

It should take you approximately 20 minutes to complete the survey. You must be 18 years of age or older to participate in this study.

RISKS AND DISCOMFORTS

This study presents minimal risk, which is not greater, in and of itself, than what is ordinarily encountered in daily life.

CONFIDENTIALITY

The online survey will collect no demographic or personal information about the participants or their schools, and responses will not be traceable back to their sources. Collected data responses will be anonymized by the survey instrument before they are accessible by the investigator.

Personally identifiable names and contact information collected as part of the incentive raffle will be separated from survey data responses, made accessible only to the investigator, and stored in a secure, password-protected server in a file to be destroyed upon completion of this research project.

All documents and information pertaining to this research will be kept confidential in accordance with all applicable federal, state, and local laws and regulations. Data generated by the study may be reviewed by Plymouth State University's Institutional Review Board, which is a committee responsible for ensuring welfare and rights of a research participant, to assure proper conduct of the study, and compliance with university regulations. If any presentations or publication results from this research, participants will not be identified by name or by personal details that would allow for identification.

ALTERNATIVE PROCEDURES

The alternative is not to participate in this study.

TERMINATION OF PARTICIPATION

You may choose to withdraw from this study at any time and for any reason up until you submit a completed survey. If you choose to drop out of the study, just cease completion of the survey and you do not need to do anything further. Because the surveys are anonymous, research records cannot be destroyed following submission of completed survey responses.

BENEFITS

There may be no direct benefits to participants. However, participation may provide insight and contribute to knowledge development for legislators, school administrators, and other education stakeholders about the effectiveness of current statewide dropout prevention policy and practice, and could serve as a basis for making further changes. Improving high school graduation rates is beneficial to at-risk students in terms of health and wealth for themselves and their progeny, and to society in terms of decreased crime, welfare, and increased social engagement and tax revenue.

COMPENSATION

There are no costs to you for participating in this study, and you will not receive payment.

As a token of appreciation for your time and effort, upon completion of the survey you will have the opportunity to enter into a raffle for one of two \$25 Amazon.com gift cards. Submission of your email address is optional and constitutes entry into the raffle. Gift card winners will be drawn at random at the end of the data gathering process and receive their prize at the email address they provided.

INJURY COMPENSATION

Neither Plymouth State University nor any government or other agency funding this research project will provide special services, free care, or compensation for any injuries

resulting from this research. By clicking through to the survey, you acknowledge that you understand that treatment for such injuries will be at your expense and/or paid through your medical plan.

QUESTIONS

By clicking through to the survey, you acknowledge that all of your questions have been answered to your satisfaction and if you have further questions about this study, you may contact Amy Gall at 603-838-5081 or aegall@plymouth.edu. If you have any questions about the rights of research participants, you may call the Chairperson of the Plymouth State University's Institutional Review Board at 603-535-2915 (Valid 2023).

VOLUNTARY PARTICIPATION

Participation in this study is entirely voluntary, and refusal to participate will involve no penalty or loss of benefits to you. You are free to withdraw or refuse consent, or to terminate participation in this study without penalty or consequence.

Because of the anonymous nature of the survey, your name will not be collected as a study participant. Completion and/or submission of the survey constitutes acknowledgement of your voluntary consent and agreement to participate in this research study. You acknowledge that this document is to be your copy of the consent form, which you may print for your records.

By submitting a completed survey, you certify that to the best of your knowledge you understand this study and your rights as a participant, and have been given an opportunity to ask any questions regarding the nature, risks, and benefits of participation in this research study.

Investigator's Name & Digital Signature: Amy Gall

Date: February 1, 2023

Plymouth State University's IRB has approved the solicitation of participants for the study until December 19, 2024.

