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Abstract
Postsecondary employment and education enrollment rates for students with disabilities are substantially lower than rates for students without disabilities, despite recently amended legislation requiring high schools to provide transition planning to develop college and career readiness. The purpose of this study was to investigate aspects of transition planning experienced by students with disabilities, including course of study, direct instruction, and student role, and to simultaneously study postsecondary outcomes among youth with disabilities. In addition, an important focus of the study was to disaggregate both postsecondary outcomes and aspects of transition planning by disability category because much current literature regarding transition planning does not disaggregate by all twelve disability categories. This mixed-methods study utilized data from the National Longitudinal Transition Survey-2, New Hampshire Indicator 13 (transition planning) and Indicator 14 (postsecondary outcomes) compliance and survey data, and six interviews from two high schools each (three educators and three alumni who received special services in high school) for a total of twelve interviews, providing an opportunity for detailed investigation into how transition planning impacted employment and educational outcomes for students with different disabilities.

It was found that employment and education enrollment percentages vary by disability categories. Young adults with mild disabilities tend to be more often employed and enrolled in postsecondary college programs than young adults with more involved disabilities. Although students with intellectual disabilities were the least likely to be enrolled in college, they reported receiving the most direct instruction about transition in high school. Students with visual and hearing impairments most often took the leadership role in their transition planning and were the most likely to be enrolled in postsecondary education. Unfortunately, New Hampshire state-level data was limited, and did not allow study of the relationship between transition planning features and educational or occupational outcomes. However, interviews with former students and current educators from two high schools in New Hampshire suggest that positive educational and occupational outcomes for these students were related to aspects of transition planning, involvement in a course of study, and social opportunities during high school.

Keywords
disability, employment, postsecondary, special, transition, vocational, Vocational education, Education policy, Special education
UNDERSTANDING TRANSITION PLANNING AND POSTSECONDARY OUTCOMES FOR YOUNG ADULTS WITH DISABILITIES ACROSS NATIONAL, STATE, AND SCHOOL LEVELS

By

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DISSERTATION

Submitted to the University of New Hampshire

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Doctor of Philosophy

In

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ABSTRACT

UNDERSTANDING TRANSITION PLANNING AND POSTSECONDARY OUTCOMES FOR YOUNG ADULTS WITH DISABILITIES ACROSS NATIONAL, STATE, AND SCHOOL LEVELS

By

Caroline Arakelian

University of New Hampshire, May, 2017

Postsecondary employment and education enrollment rates for students with disabilities are substantially lower than rates for students without disabilities, despite recently amended legislation requiring high schools to provide transition planning to develop college and career readiness. The purpose of this study was to investigate aspects of transition planning experienced by students with disabilities, including course of study, direct instruction, and student role, and to simultaneously study postsecondary outcomes among youth with disabilities. In addition, an important focus of the study was to disaggregate both postsecondary outcomes and aspects of transition planning by disability category because much current literature regarding transition planning does not disaggregate by all twelve disability categories. This mixed-methods study utilized data from the National Longitudinal Transition Survey-2, New Hampshire Indicator 13 (transition planning) and Indicator 14 (postsecondary outcomes) compliance and survey data, and six interviews from two high schools each (three educators and three alumni who received special services in high school) for a total of twelve interviews, providing an opportunity for detailed investigation into how transition planning impacted employment and educational outcomes for students with different disabilities.
It was found that employment and education enrollment percentages vary by disability categories. Young adults with mild disabilities tend to be more often employed and enrolled in postsecondary college programs than young adults with more involved disabilities. Although students with intellectual disabilities were the least likely to be enrolled in college, they reported receiving the most direct instruction about transition in high school. Students with visual and hearing impairments most often took the leadership role in their transition planning and were the most likely to be enrolled in postsecondary education. Unfortunately, New Hampshire state-level data was limited, and did not allow study of the relationship between transition planning features and educational or occupational outcomes. However, interviews with former students and current educators from two high schools in New Hampshire suggest that positive educational and occupational outcomes for these students were related to aspects of transition planning, involvement in a course of study, and social opportunities during high school.
INTRODUCTION

The discrepancy between individuals with disabilities who are gainfully employed compared to individuals without disabilities remains substantial (28.7% vs. 72.8%) according to the Bureau of Labor Statistics (BLS) Job Report news release on January 6, 2017. In addition, students with disabilities attend postsecondary education at much lower rates than their neurotypical peers, children not diagnosed with a disorder or disability (Grigal, Hart, Smith, Domin, Sulewski & Weir, 2015). More specifically, in the United States, only 19.8% of people with disabilities ages 18 to 64 have an Associate’s degree or higher, compared to 37.9% of people without disabilities in the same age range, a marked difference of 18.1 points (Houtenville, Brucker, Gould, & Antal, 2015).

Data from the National Longitudinal Transition Survey 2 (NLTS2) (2009) reveals that in addition to lower employment and college-enrollment rates, adults with disabilities more commonly attain low-skill and low-paying jobs (Newman, Wagner, Knokey, Marder, Nagle, Shaver, et al., 2011). These jobs could be viewed as stepping-stones to higher-paying, full-time, and more career-related employment that may include benefits however adults with disabilities are not escalating beyond these jobs at the same rate as their neuro-typical peers who also have a higher rate of completing college programs (Grigal et al., 2015). It is logical to link the much lower enrollment rates in postsecondary education programs to the higher rates of low-paying jobs for people with disabilities. Attaining degrees from postsecondary education programs has been shown to be a pathway to more sustaining and higher paying employment (BLS, 2017).
Students with a disability, upon leaving high school, clearly have reduced options for employment and for pursuing post high school educational opportunities. This is a cause of concern for educators as well as a concern for the community.

**Individuals with Disabilities Education Act**

In 1975, the Individuals with Disabilities Education Act (IDEA) was enacted by Congress (US DOE, 2010). The original purpose of IDEA was to meet the individual needs of, and improve results for infants, toddlers, children, and youths with disabilities and their families (US DOE, 2010). Carter, Brock, Bottema-Beutel, Bartholomew, Boehm, and Cease-Cook, quote the principal purpose of special education as stated in the Individuals With Disabilities Education Improvement Act of 2004 (IDEA) as to “prepare [students with disabilities] for further education, employment, and independent living” within a national policy aimed at “ensuring equality of opportunity, full participation, independent living, and economic self-sufficiency for individuals with disabilities” (2013, p. 15). However, the original IDEA did not specifically address support for students with disabilities in terms of transition planning from high school to postsecondary options. The federal government added transition planning as a mandated component of IDEA in 1990 with improvements in 1997 and 2004 (IDEA, 2004).

Thus, in an effort to improve educational and occupational outcomes for individuals with disabilities, the version of IDEA reauthorized in 2004 requires that upon turning sixteen years-old all students identified with disabilities must have a transition plan in place, including a Summary of Performance document, to help generate sustaining post-secondary school outcomes, including employment and post-secondary education (IDEA, 2004; Newman et al., 2011). In order for the transition plan to be implemented by age 16, the process of developing the plan must start at least one year earlier (34 C.F.R. 300.520 [20 U.S.C. 1415(m)]).
The field of special education and, more specifically, transition has expanded over the past three decades due to innovative practices in schools, federal legislation, policy changes at the local and state levels, and self-advocacy efforts which has impacted the delivery of transition planning in schools (Carter et al., 2013). However, despite the reauthorization of IDEA, transition practice and postsecondary school outcomes for young adults with disabilities continue to be a focus due to the persistent low rates of employment and college enrollment (BLS Report, 2017; Grigal et al., 2015).

**Transition Requirements**

Schools are increasingly held accountable for transitioning youth per requirements for students’ Individual Education Plans (IEPs) as outlined in the transition section of Indicator 13 of IDEA (2004); (Simonsen & Neubert, 2013). Through annual authentic assessment and transition interviews with students with disabilities, special educators are required to develop IEP goals for employment, independent living, and college or training and provide evidence of progress towards those goals (IDEA, 2004). In addition, Indicator 13, the section of IDEA that focuses on transition requirements for schools, calls for a detailed course of study for each year of high school (which may last until the student is age 21 depending on the disability). This course of study includes courses wherein a student will learn the skills necessary to meet the postsecondary employment and education goals and an increased student role so as to foster self-determination (IDEA, 2004). Focusing particularly on personal preferences (such as in “person-centered planning” that involves a series of structured brainstorming sessions to map out an individual’s goals, needs, and resources) and ongoing support services is positively linked with improved employment outcomes and higher wages (Brooke, Revell & Wehman, 2009).
preferences can also include attending college programs and independent living depending on the interests of the individual.

IDEA rules for special education indicate that the transition planning process must begin at age 16 or even age 15 if the student will turn age 16 during the span of the IEP (IDEA, 2004). Elements of the transition plan that must be updated annually include age appropriate transition assessments which drive the goals and the IEP, postsecondary transition employment and education/training goals, the course of study that must include classes (if offered) to prepare the student to meet postsecondary goals and the transition services (can include a variety of activities in school and community) (IDEA, 2004). In addition, the student must be invited to any special education meeting wherein transition will be discussed (IDEA, 2004).

**Variation in Transition Planning**

It is notable that although IDEA is federal legislation, transition policy differs across regions, states, and even across high schools within most states due to the language in the legislation (Papay & Bambara, 2014). IDEA language requires states to develop special education policies, which require its schools to implement programs that satisfy the policies. While this level of autonomy may allow schools to best address individual needs, the system fosters an inconsistent field of programs and implemented policies which can be difficult for researchers to analyze. The variation across states and schools will be discussed in more detail below.

**Variation Across States.** Consistent with other regulations for special education, IDEA requires that states develop state-level regulations for transition, which may go above and beyond the IDEA requirements (IDEA, 2004). States are required to develop their own guidelines for transition as well as determine the allocation of all IDEA funding according to the
rules of the state (IDEA, 2004). While states might appreciate the local control, this makes for
great variation in programming across states, thus providing a difference in services to be
provided to students with a disability.

In the state of New Hampshire, for example, the IEP must include an additional annual
goal with benchmarks consistent with the student’s transition plan and transition activities.
Transition activities must also list the dates of expected completion and the organization and
person responsible for implementing the activities (NH Rules for Special Education, 2014).

Perhaps the area that the states have the most control in transition programming is
allocating funds, for example, from the IDEA grant. Although states may embrace the autonomy
of designing transition programs, inconsistencies across states create difficulties when attempting
to determine the most effective as it pertains to outcomes and cost efficient transition programs.
States use different funding formulas to cover the cost of special education in schools, which
may involve per-pupil weighting or cost reimbursement (Verstegen, 2011). Per-pupil funding is a
way that states recognize that special education costs more than general regular education
(Verstegen, 2011). Therefore, if the regular education cost per pupil is one and special education
will cost 60% above regular education, the funding for that student would be calculated at 1.6.
Verstegen found through a fifty-state survey study that “states are modifying their funding
systems to provide needed additional support for students and districts with special needs that
require higher relative funding due to higher costs” (2011, p. 23). For example, when the costs
are ten times the state average per pupil expenditure, New Hampshire provides “catastrophic aid”
for 100% of the costs and 80% when costs are 3.5%-10% the state average (Verstegen, 2011, p.
16). Special education is funded by several sources including the federal IDEA grant,
catastrophic aide at the state level in New Hampshire, and teacher salaries which are allocated
within staffing and salary line items in the budget (Verstegen, 2011). If the special education department simply disappeared, a school would not be left with the unspent funds because the funding follows the student’s identified in need of specialized instruction. States are required to establish transition services for students over the age of sixteen using the funds allocated by district budgets and IDEA grant monies because the amount of funding varies across states and across schools depending on how the tax base is structured.

Given state-to-state variation in transition programming, it is important not to just study national statistics regarding transition, but also to investigate aspects of transition planning in individual states. As described above, New Hampshire provides an interesting case because 41.8% of people with disabilities are employed in New Hampshire compared to an average of only 33.1% among three neighboring states: Maine, Vermont, and Massachusetts (Houtenville et al., 2015). Since a higher percentage of employed adults with disabilities in a given state is of interest, this study will use New Hampshire data to investigate potential factors that may lead to more positive employment outcomes. Gathering both quantitative and qualitative data from one state such as New Hampshire provides the opportunity to discuss transition planning at the national, state, and school levels.

**Variation in Transition Planning Across Schools.** Although schools across the nation are required to provide transition plans that include goals regarding postsecondary life, students with disabilities have vastly different experiences and preparation for life after high school because specific aspects of the transition rules are determined at the state level and policies vary by school district (Simonsen & Neubert, 2013). There are countless examples of how schools interpret state rules for transition programming and, in fact, it often varies by student due to students’ varying dreams, goals, and needs (Simonsen & Newbert, 2013).
For example, in some districts, transition plans have been shown to have positive outcomes when they are integrated with what teachers have learned what works for the student into the Individual Education Plan (IEP) transition plan benchmarks and goals (Ofoegbu & Azarmsa, 2010). When educators learn from what works for the individual and take it back to the team document (IEP) that students can benefit from the planning and information from everyone involved. In addition, students who participate in transition programs that include career exploration activities to educate and practice skills surrounding the world of work during high school have better success after high school (Ofoegbu et al., 2010). One such study by Ofoegbu and Azarmsa in 2010 in Long Beach, California, utilized quantitative measures to study the outcomes as they pertain to participation in their transition program. They found that 67% of students who participated in a career exploration program such as the “Vocational Education Program (VEP)” and graduating during the years of 2004-2006 were able to acquire employment and sustain employment until the time of this study.

The evaluation of transition planning is an additional contributing factor to inconsistency across schools. Planning for transition must persist and should be evaluated and measured to determine the efficacy of the plans developed however when accountability methods vary across schools, it is difficult to ascertain which methods are effective (Newman et al., 2011). When a system is in place to evaluate the methods on a consistent basis, it will strengthen the quality of transition services (Brooke et al., 2009). Although percentages of employed youth with disabilities remain significantly lower than that of the overall population (Brooke et al., 2009), some states are allocating funding that focuses on integrated employment services such as Vocational Rehabilitation in the state of New Hampshire. All of this is not to say that employment outcomes are the only measure of the efficacy of transition planning.
Transition services in schools may employ an evaluation process including a rubric that measures the effectiveness of such programs which could be used to foster consistency across schools (Brooke et al., 2009). One method that has increased transition success in students establishes or utilizes already generated quality indicators (p. 159). Gathering perceptions from educators maintains quality and accountability within schools as a way to consistently monitor programs (Collet-Klingenberg & Kolb, 2011). Although self-reporting inherently is limited by the subjectivity of gathering perceptions from teachers and students, the people who know the most about a particular school and follow the individual stories and outcomes of the graduates are the educators and students themselves. This is important information as scholars and proponents of school change move forward in advocating for all students and what works best at the local level (Collet-Klingenberg & Kolb, 2011).

Given school-to-school variation in transition programming, specifically with respect to integrating adult agency services, evaluating outcomes and programming, it is important for research on transition to investigate the factors that potentially contribute to successful outcomes. Therefore, this study will address these issues at the national and state levels by investigating variation in transitioning programs experienced by students and by conducting a qualitative investigation of transition planning in two high schools in New Hampshire.

Disability Category

Transition policy and planning must be implemented for all students who qualify for special education within all twelve disability categories identified by IDEA (2004). Research findings regarding lower employment rates for individuals with disabilities are consistent across populations (BLS, 2017), however recent research fails to disaggregate the data by disability category and school characteristics. Based on the body of research in transition and
postsecondary employment outcomes, researchers recommend further analysis of employment outcomes of individuals across every disability category. According to Baer, Daviso, Flexer, McMahan Queen, and Meindl (2011), most of the existing follow-up studies of youth in special education do not disaggregate by disability. Characterized as a “missed opportunity” by Gerber, Batalo, and De Arment, they state, “Disability is viewed as a unitary construct with little differentiation by specific disability. If data were disaggregated, then the data would be more meaningful, and targeted practices and procedures affecting post school outcomes could be more effectively utilized” (2014, p. 103). Determining where the most positive employment and postsecondary education enrollment outcomes occur and with which school characteristics and individual demographics including disability category, is missing among many current studies.

Baer and associates studied the occupational and educational outcomes of 409 students with intellectual disabilities (ID) and no other category in a Great Lakes state (2011). The authors were interested in understanding the impact of inclusion, CTE, and work-study programs on post school outcomes, controlling for African American status and gender. They were particularly interested in determining if there was a significant relationship between CTE and work-study programs and full-time employment or post-secondary education and inclusion. Students with intellectual disabilities were randomly selected and then followed over a period of four years (2005-2008). They were surveyed at the beginning of the study, when they exited high school, and a follow-up interview was conducted by phone one year after they exited high school. Full-time employment and enrollment in postsecondary education were the primary dependent variables used for analysis (Baer et al., 2011).

Baer et al. found that students with ID had better outcomes when they were included with their peers (2011). However, recommendations for future research strongly suggest that studies
need disaggregated categories by all disabilities to fully understand how these factors might impact students beyond one category of disability. This study recommends disaggregating by disability category because youth receiving special services during their high school careers typically have different secondary school experiences than their neuro-typical peers and across disability categories including less participation in general education classes and increased participation in alternative diploma-track programs, community-based activities, functional academic instruction, unpaid enclave work experiences, and transition programs on college campuses (Baer et al., 2011).

The high priority variable for this dissertation which may predict better employment and education outcomes for young adults with disabilities is disability category. The designated categories include: specific learning disability, speech/language impairment, intellectual disability (previously called mental retardation), emotional disability, hearing impairment, visual impairment, orthopedic impairment, other health impairment, autism, traumatic brain injury, multiple disabilities, and deaf-blindness. These are the disability categories consistent with what is delineated in IDEA for schools (See Appendices A & B).

**Methodology in Research on Transition**

A variety of different analytic methods have been used to study transition programming including quantitative studies (Newman et al., 2011) and qualitative (Agran & Hughes, 2008). All schools in the United States are required to provide postsecondary outcome data that includes employment and education enrollment status of students who received special education while in high school (IDEA, 2004). Thus, many studies of the educational and occupational outcomes for youth with disabilities have investigated longitudinal outcome and additional survey data (NLTS2, 2009). Analysis of postsecondary outcome census survey data at the state level provide
important correlation information however due to the grouping of the disability categories and the types of employment and education enrollment in the state (and national) data collection, the results do not provide specific information about outcomes by disability category, specific types of employment, or transition programs in schools (Simonsen, & Neubert, 2013). Researchers will not find outcome or transition program information by disability category at that national level that corresponds with that of the state or school level in one study without mixed-methodology.

Although qualitative research in transition has provided important information particularly regarding self-determination and student role since the 1990s (Carter et al., 2013), research that is exclusively qualitative involves an additional disadvantage when investigating features of transition plans due to the aforementioned variation in transition planning across states and schools. When researchers collect data regarding teacher and student perceptions of what transition planning features may have had the most significant impact on successful postsecondary outcomes, it can be difficult to ascertain which factors made the difference. Without a comparative outcome data analysis, qualitative designs in the field of transition lack contextual information from which to understand a larger scope (Carter et al., 2013). Designs that involve case study and interviews can provide valuable results regarding efficacy of programs in one school or region however generalizability is limited.

It is for these reasons that it is critical for researchers to use a multi-level analysis such as at the school, state, and national levels when pursuing an analysis of transition programming that may be resulting in positive employment and education outcomes for students with disabilities. Researchers have advocated for the use of mixed methods in research on transition in several cases. For example, in their work, “Transitioning Youth with Intellectual and Other Developmental Disabilities: Predicting Community Employment Outcomes,” (2013) Simonsen
and Neubert assert, “Future research should incorporate mixed methods so that the field can more accurately characterize the types of employment experiences and the level of family engagement” (p. 196).

According to Carter et al., “...multiple methodologies are essential for answering the breadth of questions posed by practitioners and policy makers in the field of transition” (2013, p. 22). Thus, this dissertation includes quantitative analysis of several surveys utilized for the NLTS2, compliance and demographic data from the state of New Hampshire, and qualitative data by way of interviews with three students and three educators from two high schools also in New Hampshire. This mixed methodology provides the opportunity to investigate potentially contributing factors to postsecondary outcomes without the limited view of only a national dataset.

**Purpose Statement and Research Questions**

The purpose of this mixed methods study is to research potential factors that impact postsecondary employment and educational outcomes to best inform high schools as they design transition planning for students with disabilities. As described above, this is a growing area of research, with much still unknown about the ways in which transition planning occurs across schools and about the ways in which programs may have a differential impact on students as a function of various individual characteristics. Given state-to-state variation in transition planning, this dissertation includes an analysis of one state in addition to the national and school level analyses. New Hampshire was chosen as a convenience sample due to the adequate number of large high schools from which to find interviewees, proximity to the researcher, availability of the data from the NH Department of Education, and for the general positive reputation of this state’s adult agency involvement and school dedication to transition.
Thus, this dissertation will address the following questions:

1. What are the percentages of individuals who are employed or participating in post-secondary education by disability category (e.g. specific learning disability, speech/language impairment, intellectual disability (previously called mental retardation), emotional disability, hearing impairment, visual impairment, orthopedic impairment, other health impairment, autism, traumatic brain injury, multiple disabilities, and deaf-blindness)?

2. Do the percentages of students receiving transition planning features (e.g., whether the youth receives instruction specifically focused on transition planning, if the transition plan specifies the student’s course of study to achieve the transition goal, the degree the youth plays a role in transition planning) differ by disability category?

3. In the state of New Hampshire, are school level percentages of students employed and in postsecondary education related to:
   a. School-level percentages of students in various disability categories?
   b. School-level percentage of students in transition planning?

4. What transition planning occurs in two large high schools for high school students with disabilities that might explain their postsecondary employment and education outcomes?

**Delimitations**

Transition planning has been improving since 1997 due to PL 105-17 (part of IDEA) when the transition course of study and services was included in the amendment. The reauthorization in 2004 began the accountability for states with indicators 13 and 14 sections of IDEA specific to transition. In order to determine best practice, a specific cause and effect relationship, and what has most predictability for positive outcomes, research of specific
elements in transition programming is recommended going forward (Simonsen & Neubert, 2013). However, generalizations to other states cannot be made from this design because transition programming is designed at state level. Schools choose contextually feasible elements when designing transition programming. Common terms can be identified across several states in future research.

The methods utilized for the National Longitudinal Transition Survey 2 (NLTS2) that spanned ten years (2000-2009) included analyzing potential no-report bias so as to establish validity however this analysis did not identify significant findings regarding characteristics of districts that did not choose to participate in the study (Newman et al., 2011). Further investigation may be needed regarding the administering of the survey. The NLTS2 data were collected by instruments such as parent interviews, youth interviews, direct student assessment, surveys and analyzing transcripts. Although this data offers a wider range of instrumentation for collection, there remains a potential self-report threat to validity on the part of the teacher, parent, and/or youth. NLTS2 records indicate that youth and parent surveys (and interviews) were conducted over the phone so researchers could reliably gather data from the appropriate party.

**Limitations**

Although this study involves an analysis of three levels of data (national, state, and school levels), results may not be generalized to all states or all schools because transition programming varies from state to state. At the national level, the data is not available by state and the state level data is not available by every disability. The interviews are limited to six individuals from two high schools: special education director, two teachers/transition coordinator, and three former students. The study’s dependent variables are measured only
through self-reported (and sometimes parent-reported) data at the national, state, and school levels.

**Definitions**

See Appendix A for the New Hampshire definitions of disability categories. See Appendix B for disability categories compared nationally (as in the NLTS2) to the New Hampshire definitions. See Appendix C, Quantitative Measures, for NLTS2 definitions of “transition planning” according to this survey which include the following factors:

1. Youth with transition plan received instruction specifically focused on transition planning
2. Transition plan specifies course of study to achieve goal for youth with transition plan
3. The role of the youth in transition planning

**Overview of Chapters**

The introductory chapter provides an overview of the current discrepancy between postsecondary employment and education enrollments for young adults with disabilities and the rest of the population in the United States and introduced transition programming as a way to address these disparate outcomes. In addition, federal law related to special education and variation in features of transition planning across states, schools, and individuals is described. The second chapter, the literature review, provides additional information and definitions regarding federal legislation and language and a summary of existing research regarding outcome disparities, disability categories, the transition process and features of transition planning. Chapter three presents the quantitative (national and state levels) and qualitative methods used in my study. Chapter four reports results at all three levels of analysis: national, state, and school. The final chapter, chapter five, provides a summary of this study and the results, a synthesis of the three levels of data, implications, and suggestions for future research.
Chapter 2

LITERATURE REVIEW

Overview

In the first chapter of this dissertation I discussed inequalities in postsecondary employment and college enrollment between students with disabilities and typical students. I introduced transition requirements as delineated by IDEA and I described general features of the transition process. While acknowledging the positive impact of transition programming for many students with disabilities, I also suggested that the effects of transition programming are not the same for all students. Specifically, the effects of transition programming may differ by disability category. However, much research aggregates students of all disability categories, so it is important to investigate outcomes by disability category. In addition, variations in state law and individual school processes result in variation in transition programming.

The purpose of this literature review is to describe research on post-secondary educational and occupational outcomes for students with disabilities nationally and in the state of New Hampshire in more detail. I begin by reviewing current state of affairs with regards to differential outcomes for students with and without disabilities, and then I discuss the reauthorization of the federal IDEA law with its transition policy and describe the transition process and features of transition programs in schools. I review the limited research on impacts of transition programming including a review of both strengths and weaknesses. Finally, I review research that aggregates and disaggregates by disability category. This discussion provides a rationale for the importance of transition programs in schools, while also explaining
the importance of investigating students across disability categories and characteristics of the transition programs as implemented in schools.

**Postsecondary Employment and Educational Outcomes for Students with Disabilities**

As is discussed in the previous chapter of this dissertation, only 28.7% of individuals with disabilities are employed compared to 72.8% of individuals without disabilities in the United States (BLS, 2017). According to the *Facts and Figures: The 2015 Annual Report on Disability in New Hampshire* (Houtenville et al., 2015), lower employment and fewer adults attaining 2-year degrees or higher persist nationally for adults age 16-64 with disabilities (52.8%, 19.8%) compared to adults without disabilities (70%, 37.9%).

New Hampshire has more positive outcomes than the population of the United States overall; regarding employment, adults with disabilities are employed in New Hampshire more often (52.8%) than in the United States (41.8%) and more of the state’s population with disabilities have achieved a 2-year college degree or higher (27%) compared to those in the US (19.8%) (Houtenville et al., 2015).

**Federal Special Education Law Response**

Originally called the Education for All Handicapped Children Act, Public Law (P.L.) 94-142, in 1975, the Individuals with Disabilities Education Act (IDEA) was enacted by Congress to meet the individual educational needs of, and improving results for infants, toddlers, children, and youths with disabilities and their families with regards to academic progress (US DOE, 2010). In order to improve outcomes for children with disabilities in general, the federal government added transition planning as a mandated component of IDEA in 1990 with improvements in 1997 and 2004 (IDEA, 2004). This act protects the rights of students with
disabilities by ensuring that all students receive free appropriate public education regardless of ability.

IDEA has included and supported the preparation of students with disabilities for postsecondary plans in both of the improvements of 1997 and 2004 however the improvement of 2004 in particular underwent a shift from a “process orientation to a results orientation,” (Gaumer Erickson et al., 2014) in the area of secondary transition. The US DOE adopted the Indicator 13 Checklist, which was approved by the Office of Special Education Programs (OSEP) in September 2006, to help schools evaluate the documentation of coordinated transition services within Individualized Education Programs (Gaumer Erickson et al., 2014). Indicator 13 is defined as “the percent of youth aged 16 and above with an IEP that includes coordinated, measurable, annual IEP goals and transition services that will reasonably enable the child to meet the post-secondary goals” (20 U.S.C. 1416(a)(3)(B)). The partner to Indicator 13 is State Performance Plan Indicator 14, or the “percent of youth who had IEPs, are no longer in secondary school and who have been competitively employed, enrolled in some type of postsecondary school, or both, within one year of leaving high school” (20 U.S.C. 1416(a)(3)(B)).

The “transition services that will reasonably enable the child to meet the post-secondary goals” required to comply with the Indicator 13 checklist can involve countless activities offered across high school transition programming (Gaumer Erickson et al., 2014). It is for this reason that transition activities and programs vary across states and schools. More specifically, the Individual Education Plan (IEP) process must also include the following: authentic employment and education goals that are updated annually, age-appropriate transition assessment information, a course of study that leads to the attainment of the goals, a connection to adult agencies such as
Vocational Rehabilitation as determined by the IEP team, and a predominant involvement of the student at least by age 16 as evidenced by the assessment information and an invitation to all meetings wherein transition is discussed (IDEA, 2004; NH Rules, 2014).

IDEA has expanded, disability categories have evolved, and language in policy has changed to name a few factors over time that may have an impact on employment and education outcomes for youth with disabilities. These changes are due to a persisting need to improve postsecondary outcomes for students with disabilities. Researchers and policy makers recommend cross-state consistencies in language and post school data collection methods (IDEA, 2004). It will also encourage positive outcomes if multiple agencies have access and utilize post school outcome data to inform practice in schools and adult services (Alverson, 2010).

**The Transition Process: An Overview of Key Points**

To describe and define the transition process that is recommended by the US DOE, this section reviews of the “Key Points in the Transition Process” as outlined by U.S. Department of Education Office of Special Education and Rehabilitative Services in the newly released Transition Guide to Postsecondary Education and Employment for Students and Youth with Disabilities in January of 2017. Examples of what is necessary to follow through with the transition process for students with disabilities include an introduction to the summary of performance (SOP) requirement and ending with an introduction to Vocational Rehabilitation and the surrounding research. The subsequent section will highlight steps of transition planning in schools that align with the second research question of this study that include direct instruction (person centered planning), course of study (inclusion and CTE) and student role (self-determination).
The Special Education Office at the US Department of Education recently released a document to outline and describe the transition process in IDEA for schools (US DOE, 2017). All states are required to address transition by age 16 per IDEA (2004) however it could be earlier depending on state law (US DOE, 2017). Furthermore, schools are required to invite students to any meeting wherein transition is discussed by age 16 (IDEA, 2004). Participating in the transition service planning is key point #1 (See Figure 1).

The next key point (#2) lists the steps in transition planning, which are to:

1. Invite the student to the transition meeting;
2. Administer age-appropriate transition assessments;
3. Determine needs, interests, preferences, and strengths;
4. Develop postsecondary goals;
5. Develop annual goals consistent with postsecondary goals;
6. Determine transition services, including course of study needed to assist your student in reaching those goals [three services are described in the second section of this chapter];
7. Consult other agencies, in particular, the VR agency [further explained in the first section of this chapter];
8. Update annually. (US DOE, 2017; Figure 1).

Implementation of the transition plan and services by the school district is step three followed by a referral to Vocational Rehabilitation (VR) which as an adult agency was created to assist individuals with disabilities to find employment. The VR process is covered in steps four through eight of these key points and will be described later in the first section of this chapter. However, for the purposes of this dissertation, research questions only address key points 1-3.

The transition process listed in key point #2 is lengthy and detailed however when the goals and plan are crafted by using results from transition assessments, it can be an authentic reflection of what the student would like to do after high school. Because of the IDEA mandate that students with disabilities have transition plans (2004), it can be argued that this change has positively impacted the outcomes for students with disabilities. However, despite the growing
amount of information around transition services and interventions, barriers to employment and education outcomes for students, and those with high and low incidence disabilities, remain a reality (Trainor, Morningstar & Murray, 2016).

<table>
<thead>
<tr>
<th>KEY POINTS IN THE TRANSITION PROCESS</th>
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<td><strong>Alignment:</strong> IEP and IPE alignment facilitates a seamless service delivery process.</td>
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**#1. Individualized Education Program**
- Participate in your IEP or child’s IEP development to ensure that transition services are addressed in your child’s IEP by age 16 (or earlier, depending on your state’s laws). Students with disabilities and their representative are critical members of the IEP Team and have valuable information that is needed for quality transition planning.

**#2. Be Familiar with the Steps to Transition Planning**
- Schools should:
  1. Invite student;
  2. Administer age appropriate transition assessments;
  3. Determine needs, interests, preferences, and strengths;
  4. Develop postsecondary goals;
  5. Create annual goals consistent with postsecondary goals;
  6. Determine transition services, including courses of study needed to assist your student in reaching those goals;
  7. Consult other agencies, in particular, the VR agency; and
  8. Update annually.

**#3. Implementation of Transition Services**
- Provide transition services as identified in the IEP. Pre-employment transition services are provided under the Rehabilitation Act. Alignment of the IEP and IPE facilitates a seamless service delivery process.

**#4. Referral to VR and/or Other Adult Agencies**
- 1. Pre-employment transition services provided under the Rehabilitation Act, as appropriate;
- 2. Familiarize yourself with laws relating to other programs; and
- 3. Learn about community agencies that provide services to support students, such as travel training and daily living skills.

**#5. VR Application Process**
- 1. Share employment interests and capabilities during the intake interview;
- 2. Focus on assessment(s) to lead to the student’s postsecondary goals.

**#6. Individualized Plan for Employment**
- Once a student has been determined eligible for VR services, the IPE must be developed and approved within 90 days, and no later than the time student leaves the school setting.

**#7. Common VR Services Available under the Rehabilitation Act**
- 1. Transition services;
- 2. Vocational counseling;
- 3. Vocational training;
- 4. Postsecondary education;
- 5. Supported employment services;
- 6. Career development; and

**#8. VR Service Record Closure**
- As a result of the student or youth with disability:
  1. Achieving an employment outcome; or
  2. No longer pursuing an employment outcome and, therefore, determined ineligible for VR services.

Moving to Adult Services

Key points 4-8 detail the process for transitioning out of high school and into the adult service agency, namely, Vocational Rehabilitation (Figure 1). There are important pieces of the process that IDEA requires the special education department to complete as part of the transition process including writing a transition summary of performance for the student and to link the student to appropriate adult agencies (IDEA, 2004).

**Transition Summary of Performance.** In the interest of improving postsecondary outcomes for students with disabilities, special education departments are required to develop and provide a summary of performance (SOP) which is often called a “transition summary” at the time of exiting high school with a diploma or reaching the maximum age of 21 as it is in New Hampshire (IDEA, 2004; NH Rules, 2014) at the exit of his/her high school career. The SOP must include “recommendations on how to assist the child in meeting the child’s postsecondary goals” (IDEA, 2004) and schools must communicate with adult service agencies to develop the SOP. Furthermore, schools must provide final communication with adult service agencies via the SOP such as Vocational Rehabilitation housed within the Special Education Bureau of the New Hampshire Department of Education. The interagency collaboration between high schools and adult services such as Vocational Rehabilitation has been identified as a “key component in transition planning” (Richter & Mazzotti, 2011).

Richter and Mazzotti (2011) reviewed the research on the requirements of the SOP, asking why it has been determined to be helpful in supporting postsecondary outcomes, and identifying what barriers schools face in developing the SOP for each student who receives special services since the beginning of the new requirement in 2004 by the IDEA. The SOP should provide a “synthesis of information gathered during high school in simple language
including academic and functional performance data as well as recommendations to improve the likelihood of postsecondary success” (Richter & Mazzotti, 2011, p. 177). A high quality SOP aims to decrease the discrepancy between a student’s goals and what he/she actually experiences after high school. The review of the literature review found some commonalities in recommendations to enhance the benefits of a well-developed SOP including accessing adult services after high school, providing documentation of a disability to postsecondary agencies, and improving self-determination in students with disabilities who may have had trouble with advocating for themselves (Richter & Mazzotti, 2011). These recommendations are aligned with several aspects of the research questions in this dissertation with regards to successful employment and education outcomes (research question one) and increasing the student role and thereby self-determination for adults with disabilities (research question two).

In order for schools to develop high quality SOPs which will make a difference in the postsecondary lives of students with disabilities, the authors recommend that state agencies contribute to the completion of the SOP forms (p. 184). In addition, special educators benefit from professional development activities held by state agencies to create SOPs that will best help students going forward in their postsecondary education and/or employment plans. With regards to the students, when they are familiar with their own SOPs and utilize them throughout the high school experience, the SOP will most accurately reflect the student’s postsecondary goals (p. 184). It is by way of cultivating the SOP that it can serve as an instrument that promotes self-advocacy during and after high school. It is important to highlight the SOP in this research not only for the significant part it can play in interagency collaboration and communication at the time of transition, but also because the lack of the SOP in file reviews during indicator 13 audits
at schools in New Hampshire would result in a non-compliance rating by the state (NH Rules, 2014).

**Vocational Rehabilitation.** Although this dissertation addresses aspects of steps 1-3 of the “Key Points of the Transition Process” (Figure 1) as it pertains to the school’s activities and role in transition planning, it is notable that the last four points in the transition process entail the referral, alignment, and implementation of services from vocational rehabilitation. According to the Department of Special Education at the US DOE), “One of the primary roles of State VR agencies is to empower individuals with disabilities, including students and youth with disabilities, to make informed choices about their careers by providing a continuum of services to achieve employment outcomes in competitive integrated employment or supported employment” (p. 12, 2017). VR is a federal agency that exists in every state and territory to provide pre-employment and employment services to students, youth, and adults with disabilities (US DOE, 2017). VR provides services to students (“pre-employed”) and to adults much like that of a transition coordinator in a school. It is important for the school and VR to work in collaboration to provide a streamlined service to include career exploration, training, and potentially support on the job (US DOE, 2017).

According to Wehman, Chan, Ditchman, & Kang (2014), “vocational rehabilitation (VR) is the oldest and most successful public program to provide supported employment for individuals with disabilities” (p. 297). At the time of this publication (2014), VR has served approximately one million individuals with disabilities per year spending $2.5 billion annually to identify jobs, train for the job, and provide support on the job for individuals with a wide variety of disabilities in all fifty states (Wehman et al., 2014). VR defines rehabilitation as successful when the individual has become gainfully employed within ninety days of opening a case with
the agency. The authors stress the lack of research regarding the potential impact of supported employment (SE) may have across demographic characteristics, disability type, or Social Security beneficiary status. Through an analysis of the NLTS2 data, Wehman et al. (2014) determined that the effectiveness of SE as a VR service for promoting successful employment closures for young adults with IDD is important for adult living. Furthermore, this impact is especially successful for beneficiaries of Social Security Insurance (SSI) who are special education graduates (p. 307). This finding is particularly important due to the disincentive for beneficiaries of SSI to work in the rehabilitation literature due to the risk of losing financial benefits (Wehman et al., 2014). In one study, VR adult consumers with mental impairments had a 39% reduction in the odds of being employed via VR if they received cash or medical benefits (Dutta, Gervay, Chan, Chou, & Ditchman, 2008). Vocational rehabilitation is an important piece of the transition process for young adults with disabilities as they exit high school and pursue employment and/or postsecondary education goals.

The Steps to Transition Planning

Thus far, this literature review has explained the persisting low outcomes across disability category (research question one) including a review of the federal law and provided an overview of the transition process. This section reviews the three transition planning steps that are featured in research question two: direct instruction (person-centered planning), course of study (Career Technical Education), and student role (as a way to foster self-determination).

**Direct instruction.** Perhaps the transition planning method that is the flagship of the self-deterministic theory (described later in this section) is person-centered or family-centered planning (Hagner, Kurtz, Arakelian, Cloutier, Brucker & May, 2012). The authors of a family-centered transition planning project found that young adults who are identified as being on the
autism spectrum have obstacles in receiving health care and postsecondary supports and services including job support and participation in postsecondary education particularly due to a lack of services in place and a growing number of individuals diagnosed with autism spectrum disorders. The researchers followed 40 families using an experimental delay-treatment design over two years as they were provided family-centered transition planning and classes for the families regarding funding and benefits available to them as their child with a disability becomes an adult. At the beginning of the project, all families were surveyed. Half of the group received the services during the first year followed by post-surveys to attain pre and post data from a treatment and control group. The control group received the services during the second year.

The facilitators implemented a family-centered transition planning method with transitioning students with autism and their families. They also evaluated data to discover if this method was more effective than traditional school-based transition methods in improving self-determination and also improving the quality of transition plans within the IEP. Finally, researchers sought information regarding how students and parents perceived the methods of planning with the family in this fashion (Hagner et al., 2012).

The proactive transition strategy included family involvement and training, individualized service designs, and exploratory activities such as planning sessions. Focusing particularly on personal preferences (such as in “person-centered planning” that involves a series of structured brainstorming sessions to map out an individual’s goals, needs, and resources) and ongoing support services is positively linked with improved employment outcomes and higher wages (Brooke et al., 2009). Personal preferences can also include attending college programs and independent living depending on the interests of the individual.
Researchers aimed to both utilize and develop self-determination in this process as a way to make important life decisions independently because they asserted that it should be considered a critical outcome of the transition process (Hagner et al., 2012). Individuals will experience a knowledge base regarding careers and healthy youth functioning as a result of this transition process via person-centered planning as well as have high quality IEP goals. This study found a significant increase in employment of students with disabilities who received the intervention compared to the students who did not until after the data was collected. The strategy of nurturing self-determination in students on the autism spectrum was perceived as beneficial, appropriate, and effective to the students and families. In addition, self-determination positively influenced the IEP transition plans and the transition planning process at home and in schools overall (Hagner et al., 2012). This method of involving students and providing direct instruction regarding life after high school is pivotal for positive outcomes per the paired t-tests that were run separately for groups 1 and 2 (Hagner et al., 2012) however it is unknown how direct instruction might impact students in every disability category. As a result, part of the second research question in this study is with regards to whether the youth receives instruction specifically focused on transition planning across all disability categories.

**Course of Study.** Another required feature of transition planning is that the IEP must specify the student’s course of study to achieve the transition goal (IDEA, 2004). This is the second step in transition planning described in this section of the literature review that is included in the second research question for this dissertation.

Baer, Daviso, Alfred, Flexer, Queen, and Meindl (2011), surveyed students identified with intellectual disabilities (ID), learning disabilities, emotional disabilities, and “other health impaired” (OHI), finding that students with ID were less likely to be employed and enrolled in
postsecondary education programs than students with other disabilities (p. 137). Baer et al. (2011) found that when schools pursued inclusion (not necessarily a fully integrated inclusion program), students with ID, who are already determined to be included less than their counterparts in regular education classes, are less likely to be in CTE. The results suggest that it is more likely that students with ID participate in work study programs due to the lack of coexistence among work study, inclusion, and CTE (p. 138). And unfortunately, work study was not found to be a statistically significant predictor of postsecondary employment (p. 139).

Regarding postsecondary education enrollment, the only significant predictor for students with ID with regards to school characteristics was inclusion. However, descriptive statistics found only 21% of students with ID in this sample were “receiving inclusion” (p. 139). The authors of this research suggest further research to identify what school characteristics predict the most significant employment outcomes for people across disability categories to most accurately understand who is becoming employed and why (Baer et al., 2011).

As a way to address the limitations in current research, part of the second research question of this dissertation aims to reveal how direct instruction might impact students across disability categories. In addition, the third and fourth research questions regarding state-level data and schools aim to investigate more specifically which students (among disability categories) have a course of study linked to their postsecondary goals.

**Student Role.** The third and last step in transition that is included in the second research question of this dissertation is the degree to which the youth plays a role in transition planning. The purpose of requiring the student to participate in the planning is to create an authentic transition plan aligned with his/her interests and goals and also to improve self-determination
When students have a more prominent role in the transition planning process (as required by IDEA, 2004), self-determination is fostered (Kohler, 1996).

Self-determination is the most effective factor in contributing to long term employment outcomes and independent living for individuals with disabilities (Wehman & Schall, 2009). However, students with autism spectrum disorders (ASD) and students with other disabilities require a large amount of support in developing self-determination that can grow over time into adulthood so as to best support their life decisions and promote independence. Both actively developing self-determination in the individual and involving the family is integral in cultivating self-determination and self-advocacy as students are transitioning out of high school (Wehman & Schall, 2009).

The philosophy of placing importance on self-determination is backed up by empirical, peer-reviewed research. Because self-determination of students with disabilities is linked to positive transition outcomes, the purpose of Agran and Hughes’ (2008) study was to gain insight regarding to what extent students with intellectual disabilities are involved in the development of their Individual Education Plans (IEPs) in high school. The authors recognize that it is commonplace for teachers’ input to be included in the IEP development process however student/self-involvement occurs to a lesser extent and is therefore not widely documented. The authors developed a 15-question survey to interview 17 high school students and 56 middle school students. The interviews lasted approximately 15 minutes each. Their findings include discrepancies such that students were taught to utilize self-determination in everyday activities but not specifically taught how to run an IEP meeting or even, for some students, awareness of the purpose of the IEP (Agran & Hughes, 2008). The authors suggest that outcomes will be more
successful when a student has a more prominent role in the IEP planning and the transition process (Agran & Hughes, 2008).

The findings include 80% of students reported not being involved in developing their IEPs or involved in leading their IEP meetings (Agran & Hughes, 2008). The self-determination/self-advocacy questions yielded more positive results with about the half of the students reporting that they have been taught to speak up for themselves and advocate for themselves by teachers and school staff. These findings suggest that students do not perceive that they are directing their own plans for school with half not perceiving that they are even taught how to be a self-advocate. The authors acknowledge limitations to include a small sample of students, the survey was brief and may have left out key elements of the process, and most notably the information gathered was directly from the students without any outside data gathering to corroborate or contradict their responses. These findings are discouraging because the IEP meeting is a time during which a student is typically surrounded by a supportive team and therefore the safest place to practice self-advocacy. It is for these reasons that IDEA mandates that the student be involved in planning due to the potentially less than positive outcome following high school.

The purpose of Getzel and Thoma’s study (2008) was to identify the strategies students with disabilities use to sustain attendance in their 2-year and 4-year college programs as they are self-determining their decisions. In addition to the challenges neurotypical students face when entering and attending college, students with disabilities have the added challenge of self-disclosure, self-advocacy, and utilizing accommodations awarded in the postsecondary environment. Participants were chosen by Disability Service Staff of six universities across Virginia based on their level of self-determining skills in place to participate in the focus group
interview process. This sampling method was chosen so that the researchers could gather information from small groups that would be the most authentic and effective. Summaries were generated from each of the group interviews and coded to identify themes that emerged from discussions (Getzel & Thoma, 2008).

The interviews consisted of two main questions regarding what an effective advocate does to ensure the student stays in school and what skills might be essential to staying in college. The interviewers provided follow up questions to further encourage discussion however these were the two main topics used to generate discussion. The findings were consistent across groups to include self-determination, developing and strengthening networks, problem solving, goal setting, and even self-awareness as strategies and skills to encourage students with disabilities to sustain and succeed in postsecondary education (Getzel & Thoma, 2008).

Limitations of this study include a small sample and the selection method is solely at the discretion of the university staff. If an invitation to all students with disabilities was used to identify focus group participants, there might have been a different group with different results. In order to entice the less outgoing student, the project might offer more than a $25 gift card to participate. These results could be more rich with an additional method to select participants because it is not known how the students not seen as “self-determiners” were coping which challenges (if at all) in college. Self-determination is fostered when the student plays a more significant role in transition planning. Because self-determination can promote coping strategies for success in college and employment, this dissertation provides an overview of national data regarding the student role in planning for transition after high school which may contribute to the explanation as to the reasons for positive or negative outcomes.
Unlike other studies focusing on student perspective, studying preservice teachers’ understanding of self-determination can provide evidence of how self-determination for students with disabilities is understood from the teachers’ perspective (Thoma, Pannozzo, Fritton & Bartholomew, 2008). The authors explain that the literature is full of research focusing on students and their self-determination but limited for teachers. Teachers need tools to better equip students with the skills to self-advocate and use self-determination in postsecondary adulthood when disclosure of a disability and accommodations needed is optional. The authors used the context of a graduate class on special education and transition as a topic to ask questions on an exam and then analyze the documents for emerging themes. The research questions focused on the participants’ understanding of self-determination and how they might identify appropriate research-based strategies or methods for enhancing self-determination skills, transition planning, direct instruction, and transition services and, finally, what misconceptions of self-determination do participants maintain after receiving instruction designed to provide information to dispel them. Participants were 50 graduate preservice special education teachers enrolled in an online class. Researchers analyzed the midterm exam to answer research questions (Thoma et al., 2008).

Through the descriptive qualitative analysis, researchers found that preservice teachers could define self-determination and identify skills for students to practice self-determination. Furthermore, they were able to list methods and describe how they might teach self-determination such as encourage choices, decision making, and taking initiative. Limitations to this study is that it only is collecting information from current graduate students and excluding teachers already in the field who are teaching students with disabilities. Although the authors include their position on recommended future research, they do not describe how these findings
might benefit students with disabilities by nurturing self-determination today (Thoma et al., 2008).

The initial questions seeking the perspectives of students with disabilities and teachers regarding the programs and people they believe to most directly impact postsecondary outcomes were clearly reflected in the reviewed research. The main question that seems to anchor this subject remains intact which is to gain a better understanding of how students make their own autonomous decisions for their independent lives. Through this research, educators can reveal what students regard as ideal outcomes for their future goals. Furthermore, educators involved in this process have valuable insight regarding how the questions may evolve when students are more or less involved in discussing and ultimately determining what will happen after high school. Although school professionals and families may perceive success differently, self-determination remains a critical component of the transition process when considering successful outcomes (Thoma et al., 2008) and therefore important to determine the degree to which students play a role in transition planning (see research question two).

In their study entitled “Relationships Between Self-Determination and Post school Outcomes for Youth With Disabilities”, Shogren, Wehmeyer, Palmer, Rifenbark, and Little found that youth with higher levels of self-determination were more likely to have a job and have access to job benefits one year post-school which suggest that self-determination impacts the potential for integrated employment and access to benefits (p. 12, 2017). The authors explain that when the various personal and environmental factors such as access to resources and disability category that impact adult outcomes, the consistent positive relationship across research studies between self-determination and employment is very promising (Shogren et al., 2012). However,
the manner and degree of impact needs to be further explored in future research due to the barriers that remain for young adults with less self-determination.

The majority of the research regarding the student role in the transition process (as a way to garner self-determination) and teacher understanding of self-determination or advocacy measures the impact that it might have on college and career outcomes. In addition, recent research investigates to what extent self-determination is fostered by a variety of interventions such as person-centered planning. However, these studies cannot triangulate data across quantitative and qualitative methodology as it pertains to outcomes and perspectives as is done in this dissertation.

**Implementation of Transition Services**

Of all the key points in the transition process, determining and implementing transition services is the one with the greatest potential for variation (Key point #2, step 6, Figure 1) due to the IDEA mandate that states develop transition practice policy and that schools offer transition activities and plans (IDEA, 2004; NH Rules, 2014). For example, transition planning may vary because of what transition activities schools are offering students to achieve their postsecondary goals which could include college/career fairs, meeting with a school-based college counselor, particular career exploration class offerings, or opportunities for internships through connections with the community.

**A State-Level Example.** The following describes an investigation of transition programming and its impact on outcomes for students with disabilities in one state by comparing it to the NLTS2, similar to this dissertation. I am including this example within the literature review to underscore why this work is necessary. Furthermore, it is important to investigate individual states which I have in my second research question regarding the potential
relationship between school level percentages of students employed and in postsecondary education with school-level percentages of students in various disability categories and/or school-level percentage of students in transition planning in New Hampshire. The following example includes state-level analysis that is compared with national level data from the NLTS2 as it is included in chapter five of this dissertation. I believe it is useful to critically review a study in this dissertation that compares a program implemented at the state level with the NLTS2 findings to provide rationale for my mixed methodology.

In their article, “Critical Program Elements in Transition to Adulthood: Comparative Analysis of New York State and the NLTS2,” Arun Karpur, David Brewer, and Thomas Golden describe their comparative analysis of the New York State transition programming data with (2014) national longitudinal data collected by the U. S. Department of Education, Office of Special Education Programs. Researchers compared transition outcomes in youth with disabilities who participated in a “model transition program” (MTP) across 60 sites in New York State with a comparable sample they extracted from the NLTS2 data which, in its entirety, consists of outcome information regarding over 11,000 young adults over a period of ten years (2000-2009) as more thoroughly described in chapter three of this dissertation. The MTP was a New York State funded transition initiative that previously generated outcome data of 729 students who participated in the program in 2009. A comparative analysis of the MTP data and a sample from the NLTS2 data was initiated due to a lack of control group alongside the MTP participants from which to collect data at that time. This mirrors the national and state-level analysis of this dissertation however some flaws of the New York study will be described as a way to point to the rationale for the design of this study.
Young adults who were employed full time or who participated in training including postsecondary education were considered positive outcomes in the NY study (Karpur et al., 2014). Individuals who were not employed full time or participated in training or education were considered to experience a negative outcome. Researchers were attempting to measure the efficacy of the model transition program by comparing outcomes to that of students who did not participate in the program nationally. They aimed to determine the predictability of an individual having a positive transition outcome given participation in the New York State model transition program.

Because of significant differences identified in initial analysis of the New York (NY) and National Survey (NS) cohorts’ demographics and other characteristics, the data was stratified in five groups based on propensity scores. The authors were transparent regarding the drastic differences among the first groups which led them to take steps to address this issue by matching propensity scores to create heterogeneity among the respondents although this may “reduce external validity and can cause restriction of range if it is not carefully monitored,” (Shadish, Cook & Campbell, 2002).

Multivariate logistic regression models were generated using the propensity score strata along with critical program elements of MTP in NY so that researchers could study the impact of participation in the MTP project in comparison with the national data. The fact that researchers stratified the data to control for disability category and demographics indicates that there is stronger statistical conclusion validity because this is a method to increase statistical power (Shadish et al., 2002). These steps provide some evidence that the measures are valid however there are suspected threats to the internal and external validity of this study which will be detailed subsequently.
The authors admit that there is a concern about reliability in the implementation of the treatment which threatens the internal validity of the intervention (Karpur et al., 2014, p. 126). There was great variation in the fidelity of implementation of the MTP elements such as career counseling and employment training across the 60 sites in New York State. This means that any correlation found does not necessarily mean a cause and effect relationship. The multiple programming elements included “student participation in career development activities [direct instruction], in-school unpaid work and paid work experiences, establishment of postsecondary goals in IEP or transition planning [student role], and services received from community-based partner providers other than the schools the student attended. Specific career development activities included training students to prepare them for work, including career counseling, prevocational training, job search training, and internship or apprenticeship [course of study],” (Karpur et al., 2014). The authors state that it is likely that these elements work in harmony to encourage students to continue to pursue postsecondary education and full-time employment (p. 128). However, these elements were each weighted differently at each site during implementation therefore researchers were unable to determine which element produced the results: positive outcomes. In this dissertation, I isolate the variables: course of study, direct instruction, and student role so as to determine to what extent these factors might contribute to positive employment and education outcomes.

Issues with selection of participants may also pose threats to validity for Kapur and associates. The NY data consisted of individuals who agreed to participate in the project and who were signed up for Vocational Rehabilitation services as recorded by Transition Coordinators and case managers in schools only. These are students who are more interested in participating in a study and possibly then also more likely to be employed and participate in training. Transition
Coordinators are also likely to be the facilitators of transition programs in which they would have a stake in succeeding and have positive expectations which may have influenced their reporting. Because the design did not include a control group in NY, people who declined to receive the MTP from the same schools were eliminated from selection, which represents a missed opportunity. The NLTS2 data were collected by instruments such as parent interviews, youth interviews, direct student assessment, surveys and analyzing transcripts. Although this data offers a wider range of instrumentation for collection, there remains a potential self-report threat to validity on the part of the teacher, parent, and/or student. Although this dissertation also analyzes portions of two surveys of the NLTS2, the self-selection threat to validity is less of a factor due to the New Hampshire Department of Education compliance data, which includes information about all schools and all students receiving special services in the state.

The history of the culture in the state may have weakened the validity in the MTP data collection process. NY was granted funding because the entire state was mobilized with a new focus on transition which could have had positive effects through practice, curriculum, and/or instruction above and beyond the MTP timeframe. A new focus on transition in the state may have resulted in the strengthening of existing components in New York State high schools. In addition, MTP had to end prematurely so there is no opportunity to conduct longitudinal studies. Comparatively, New Hampshire is currently completing a state professional development grant project focused on transition entitled “Next Steps: College and Career Readiness Project” (2013-2017) however the state-level data years analyzed for this study are 2011-2012 and schools for the qualitative portion of this study did not participate in the grant-funded project.

The timing of the NY project data observed may have impacted the validity of comparing the data because of outside factors. Outcomes were observed in 2009, which was just after the
economic downturn in the United States which should have created a more negative effect in comparison to the NLTS2 data observed in 2004-2005. The IDEA “improvement” was just passed in 2004 and may have had more of an impact on transition programming by 2009 when the NY outcomes were observed. Although there was a downturn in the economy in 2009, the MTP data had the benefit of more policy and law to support transition programming by that year. The NLTS2 data did not have that benefit by 2004-2005. The NLTS2 surveys analyzed in this dissertation are from waves 1, 2, and 5 which took place in years 2001, 2003, and 2009.

Construct validity is in question for the NY study because the authors did not confirm that the career development activities were defined equally by the NLTS2 and NY/MTP data collectors. They did admit, however, that these factors vary from state to state because transition programming is established at the state level. Furthermore, the control group from NLTS2 may have been receiving services such as Vocational Rehabilitation counseling and other services so they would not be a true control group unless the authors could weed that out. Also regarding the control group versus the intervention, this article does not share original NY outcome data across disability so whatever efficacy they are determining in this study is only in correlation with NLST2. We don’t know the extent to which NY data is significant because it is only correlating with NLTS2 as the “control”. Readers cannot discern if students were employed before MTP which poses a potential ambiguous temporal precedence that is a validity threat. This dissertation uses the NLTS2 outcome data across all disability categories and, furthermore, includes the survey question if individuals were “currently employed and since leaving high school” (Parent/Youth combined survey results conducted in Wave 5, 2009). Including the “since leaving high school” removes the potential threat to validity of the efficacy of the transition planning because the data will reflect if an individual was previously but not currently employed.
In order to determine best practice, a specific cause and effect relationship, and what has most predictability for positive outcomes, research of specific elements in transition programming across states and research methodology is recommended by Karpur and associates going forward (2014). Generalizations to other states cannot be made from Karpur and associates’ design because transition programming is designed at state level however common terms can be identified across several states in future research (2014). Schools should choose contextually feasible elements when designing transition programming. The positive results of the NY-MTP project were not determined over a wide variety of conditions. Finally, due to societal changes in the economy and special education law, future research would be the most valid when comparing data collected in the same year rather than 4-5 years apart.

This dissertation compares data from wave 9 of NLTS2 (2009), the earliest compliance data from New Hampshire available being 2013-2014 (2012 “leavers”) and interviews from students who graduated in years 2011-2015. The NH state-level data was pulled from 2013-2014 Indicator 13 compliance report and data and Indicator 14 Post School Consensus Survey was utilized (2012 “leavers”) because it consists of the most recent data available at the time of this study. The state of New Hampshire only began collecting Indicator 13 and 14 data beginning in 2010-2011 and, as a result, participation in the survey has increased since that year. Utilizing data from the year 2013-2014 provides more data and aligns with the qualitative portion of this study due to the interviewees exit dates from high school. The difference between the previous article review and this dissertation is that in addition to national and state-level data analysis, I have included a qualitative research question. It is in this way that this dissertation aims to provide a valid comparative synthesis of information at three levels.
School-Level Evidence-Based Practice. Research on practice in transition planning, and implementation in particular, reveals certain conditions under which transition planning is most successful. Trainor et al. (2016) found that transition planning most correlates with positive outcomes when it is closely associated with Kohler’s Taxonomy Transition Planning Framework (Kohler, 1996; Kohler, Gothberg, Fowler & Coyle, 2016). This taxonomy framework consists of five subject areas in which to generate services: student focused planning, student development, interagency collaboration, family engagement, and program structures (Kohler, 1996). In the “Taxonomy 2.0” Kohler and her team of researchers provide extensive suggestions for transition planning in each of the five areas (2016). Student focused planning involves strategies for IEP development, planning strategies, and student participation. Student development lists methods for assessment, academic skills, student support, emotional context, and employment, occupational, life, social, and emotional skills. Interagency collaboration involves Collaborative framework and collaborative service delivery strategies are provided for interagency collaboration. Family engagement is fostered with involvement, empowerment, and preparation. Finally, categories to develop program structures include suggestions for program characteristics, program evaluation, strategic planning, school climate, and policies and procedures (Kohler et al., 2016).

While it may not be possible for all high schools to align transition programming to Kohler’s taxonomy due to a lack of resources, time, and coordination, schools are implementing transition activities that are outlined in the IEP and addressing Indicator 13 requirements as mandated by IDEA (2004) and the NH DOE (NH DOE Rules, 2014). The implementation of transition services (Figure 1, Key Point #3) states the IDEA mandate that transition services must be provided as outlined in the IEP and facilitated by a “seamless service delivery process” from
the school to adult service agency, if applicable. Because the transition plan goals and
benchmarks have to be individualized according to the student’s plans and goals, the activities
will also vary across schools and even across individuals. For example, if the career goal is to be
a landscaper, the transition activities might include job shadows while a goal to be a chemist
would require activities including meeting with the college counselor and college visits. It is
important to include qualitative information from students who attend schools to identify what
transition activities were perceived as the most effective and had the most impact toward
postsecondary goals however the current pool of research lacks studies that investigate the
efficacy of transition activities and the potential impact they might have on postsecondary
outcomes among students with disabilities. It is for this reason that the third research question of
this dissertation investigates what transition planning occurs in two large high schools for high
school students with disabilities that might explain their postsecondary employment and
education outcomes in addition to the national and state-level analysis.

Summary

The goal in the field of transition is widely understood to be successful student outcomes
after high school for students with disabilities which include the areas of employment,
postsecondary education, and independent living because these factors increase over-all well-
being in the individual and benefit society to have involved citizens (Hagner et al., 2012). School
programs influence these outcomes during high school. Adult services influence these outcomes
at the very end of high school and during adulthood. With these outcomes as the end goal, the
foundational principles also must be established before establishing a research question. A
primary foundational principle regarding special education is to believe in the mission of
integrating a universal design for learning within the curriculum, facilities, materials, and culture
in schools, which embodies a design of inclusion and access to all opportunities offered at the school which ultimately will foster a smooth transition to adult life. Students with disabilities should also have the opportunity to self-determine goals for their future with regards to postsecondary activities and outcomes. Although the mandates exist, disparities persist for the outcomes for students with disabilities which may be due to a gap in the research that specifically investigates Indicator 13 requirements (course of study, direct instruction, and student role) and Indicator 14 factors (employment and education outcomes) by disability category at the national, state, and local levels.

**Bridging the Gap: Disability Category**

While the federal and state percentages provide evidence of a clear contrast in outcomes among adults with and without disabilities, the outcome data is only disaggregated by the following categories: hearing disability, vision disability, cognitive disability, ambulatory disability, self-care disability, and independent living disability (Houtenville et al., 2015). In order to understand potential predictors of these lower employment and education outcomes for adults with disabilities and potentially inform schools how to prepare students by all disability categories, an investigation of the research with regards to outcomes across disability category in more detail is warranted.

The majority of postsecondary outcome research currently includes samples of one or two disability categories which are predominantly autism and intellectual disabilities to identify best practices for transition planning (Bouck & Joshi, 2012; Bouck, & Joshi, 2015; Burgess & Cimera, 2014; Papay & Bambara, 2014; Ross, Marcell, Williams & Carlson, 2013; Simonsen, & Neubert, 2013). Yet other studies have been found to compare one disability category such as intellectual disability with all other disabilities when investigating factors that potentially impact
postsecondary outcomes (Grigal et al., 2011; Shogren et al., 2012; Karpur et al., 2014). Although the design of these studies have provided important results regarding best practice (direct instruction and a predominant student role in transition planning), they leave out results regarding other categories which could have had the potential to inform educators how to provide effective plans for students across categories.

Transition planning practice differs across disability category due to the great variability in the disabilities and the individuals themselves (Baer et al., 2011). Among the research found for the purpose of this literature review that aggregates disabilities (Gaumer Erickson, Noonan, Brussow & Gilpin, 2014; Gerber et al., 2014; Sulewski, Zalewska, Butterworth, J. & University of Massachusetts Boston, 2012), all cite disaggregating by category as a missed opportunity for their results. As a result of the commonly aggregated disability categories in transition research, a gap in the research exists that could otherwise identify best practice for schools to comply with transition programming as mandated by federal legislation.

**Summary of Research Plan and Importance**

To summarize the research plan for this dissertation, I explore employment and education outcomes at the national and state level (New Hampshire) and also interview educators and former students from two school districts within the same state. It is important to explore this information utilizing a mixed methods design for a variety of reasons. First, because the US DOE requires that high schools develop and offer transition plans, services, and activities for students with disabilities (IDEA, 2004), transition practices vary across states. It is for this reason that I decided to analyze national data regarding transition outcomes and features of transition planning as well as interview educators and students to understand what, if any, of these factors might be impacting the outcomes. In addition, the plan includes looking at state-
level information wherein the interviewees went to high school to involve the transition compliance data as it pertains to one state: New Hampshire. It is by analyzing national results, state findings, and transcripts of interviews that I discuss the interplay between transition planning and successful outcomes for young adults in all twelve disability categories.

It is important to further investigate factors that may be contributing to employment and education outcomes for people with disabilities because they continue to be employed and enrolled in postsecondary education at much lower rates that their neuro-typical peers (Bureau of Labor Statistics, 2017). Furthermore, due to a lack in the research across all twelve disability categories in special education, it is important to analyze findings without grouping low incidence disability categories with high incidence or any other kind of groupings. Disabilities vary greatly and therefore the data varies greatly by sub-group. As schools prepare to fulfill the IDEA (2004) and state obligations for transition planning, information about students’ disabilities and potential for success is critical. Finally, because schools are required to develop and implement their own transition services, how these services come to fruition vary across state, district, and often by high school. It is for these reasons, a three-level, mixed methods design is essential to cancel out threats to validity and truly understand what will assist students to be productive members of society.
Chapter 3

METHODS

This chapter reintroduces the problem under investigation in this dissertation and reviews the three levels of analysis in this mixed methods study. It provides a rationale for the quantitative and qualitative analysis and describes the data sources at each level. Discussion of analyses conducted at the national and state levels includes descriptions of the data source and variables. The description of the qualitative methods employed in my work provides information regarding participant and site selection.

Restatement of the Problem

Discrepancies between the percentage of employed and college-enrolled young adults without disabilities compared to that for young adults with disabilities persist for schools and policy-makers; discrepancies persist despite changes in federal legislation (IDEA, 2004; Gerber et al., 2014). Researchers and practitioners seek to improve postsecondary employment and educational outcomes by informing high schools as they design transition planning for students with disabilities while fulfilling the IDEA requirements for the process (Grigal et al., 2015). One may surmise that transition success rates at the national level could inform state policy and thereby impact students with disabilities as they transition high school into adulthood.

Mixed Methods Rationale

The purpose for combining qualitative and quantitative data collection methods in this study is to gain information about different aspects of transition planning and the outcomes which might not otherwise be available. The strategy of triangulating the data “reduces the risk that conclusions will reflect only the biases of a specific method, and allows you to gain a more
secure understanding of the issues you are investigating” (Maxwell, 2013, p. 102). Using multiple methods such as secondary data analyses and interviews in one study allows the researcher to understand and synthesize information from several levels and perspectives. This mixed methods approach provides a perspective of educators and former students which may provide a greater depth in understanding of how disability and transition planning impacts employment and education enrollment.

Figure 2. Explanatory sequential mixed methods diagram.

The link between transition policy and postsecondary school outcomes regarding the employment, education, and independent living of students who received special services in high school, “follow along” or “follow-up” has been used. (Alverson et al., 2010). Follow-up methods involve collecting “retrospective, cross-sectional data on predictor and outcome variables at a single time point” (p. 155). Follow-along methods collect “prospective, longitudinal data on predictor variables at a single time point and on outcome variables at defined intervals at subsequent points in the future” (p. 155-156). These studies found significant discrepancies between the post school outcomes of neuro-typical students and students with disabilities,
demonstrating that students with disabilities continue to struggle with sustaining employment (Newman et al., 2010). However, major limitations are present in longitudinal studies as Alverson, Naranjo, Yamamoto, and Unruh found in their synthesis of the literature regarding methods of collecting post school outcome data for students with disabilities (2010). For example, students with disabilities “have been receiving transition services since the early 80s,” (Alverson et al., 2010) and since then, changes in policy and law have occurred several times (IDEA, 2004; Alverson et al., 2010). Law and policy changes over the course of a longitudinal study may impact the validity of the results due to the potential change in delivery of services for students.

This mixed methods study involves analyses of NLTS2 data, Postsecondary Outcomes Census Survey Data and district profile information from the state of New Hampshire, and qualitative data from interviews with twelve participants from two high schools. Quantitative methods involves predictors including disability categories and aspects of transition planning further described in the analytical approach of the NLTS2 section of this dissertation. Outcomes include employment and enrollment in postsecondary education across all quantitative sources (See Appendix C). Qualitative analysis involves interviews of a special education director, two teachers, and three former students each at two large-sized high schools in southern New Hampshire (See Figure 2).

The benefit of the mixed methods design of this study allows the researcher to discuss outcomes by disability category at the national level while also considering the qualitative data at the state level gleaned directly from staff and students from two high schools in New Hampshire regarding what factors might be contributing to their outcomes. Additional state and district level outcome and compliance data were analyzed to determine if those potentially contributing
factors correlate with the status of the state of New Hampshire where the interviewees were found.

**Population**

The target population for the national level of analysis consists of students who have been identified with disabilities and are eligible for special education in the United States and are thereby receiving specialized instruction as indicated on an Individualized Education Plan (IEP). The population for the state-level analysis includes students receiving special services in the state of New Hampshire. Finally, for the school level, the population consists of students who formerly attended two large high schools and received special services.

**Quantitative Methods**

**National Level: Analysis of National Longitudinal Transition Survey 2 (NLTS2) Data**

*Rationale.* In the field of transitioning students with disabilities from high school to their adult lives, patterns of research methodology can be found among quantitative and qualitative methods of inquiry. As in any field, these patterns and tendencies have driven what we know and carve out our reality regarding the truth for the needs of students with disabilities during high school and beyond. Quantitative research in particular has primarily involved analyses of longitudinal datasets, which have tracked student outcomes with regards to employment and postsecondary education for many years (Newman et al., 2010). Large datasets consisting of thousands of subjects provide valuable information regarding the impact of policy on students transitioning out of high school. Comparing student outcomes from the NLTS and NLTS2 has found correlations between outcomes and policy changes such as new requirements to monitor the transition of high school students with disabilities as well as amendments to IDEA in 2004 opening up new opportunities for students vocationally (Newman et al., 2010).
Data analysis conducted at the national level addresses two of the four research questions explored in this dissertation:

5. What are the percentages of individuals who are employed or participating in post-secondary education by disability category (e.g. specific learning disability, speech/language impairment, intellectual disability (previously called mental retardation), emotional disability, hearing impairment, visual impairment, orthopedic impairment, other health impairment, autism, traumatic brain injury, multiple disabilities, and deaf-blindness)?

6. Do the percentages of students receiving transition planning features (e.g., whether the youth receives instruction specifically focused on transition planning, if the transition plan specifies the student’s course of study to achieve the transition goal, the degree the youth plays a role in transition planning) differ by disability category?

Data Source. The data source is the National Longitudinal Transition Study-2; a multiyear longitudinal survey conducted by the U.S. Department of Education that included 11,270 youth nationwide who were ages 13 through 16 at the start of the study (2000) (IDEA, 2004; Newman et al., 2010). Through demographic information, youth assessments, telephone interviews, teacher, and student surveys, the NLTS2 documented the experiences of a national sample of students who were 13 to 16 years of age in 2000 as they moved from secondary school into adult roles. The students were 21 to 25 years old at the final data collection (Wave 5) in 2009 when the students were one to four years post high school (students who remain in high school until age 21 due to a more involved disability) or three-seven years in high school (students who remain in high school until an approximate age 18 which is the end of their fourth year) (See Table 1). Information was collected over 10 years from parents, youth, and schools
and provided a national picture of the experiences and post school outcomes of students with disabilities as they transition into early adulthood. The NLTS2 provides five waves of data collection from 2001-2009; however, this study focuses on data collected during waves 1 and 5.

Table 1

NLTS2 Timeline

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<th>Table 2-1</th>
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<td>Parent telephone interviews</td>
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<td>Youth telephone interviews</td>
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<td>Direct assessment/student in-person interviews</td>
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<td>Teacher survey</td>
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<td>School program survey</td>
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<td>School background survey</td>
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**Sampling and Data Collection.** Students were selected by inviting randomly selected school districts which were first identified by geographic region, size, and socioeconomic status. After researchers determined which districts to select for the study, the districts were contacted and invited to participate. NLTS2 asked for each district's list of special education students along with each student's grade, date of birth, and disability classification. Approximately 12,000 students were randomly selected to participate in NLTS2 based on the student's age and disability classification from the more than 500 school districts.

Parent and youth interviews were conducted using largely the same parents and youth from the beginning of the nine-year study and every other year thereafter. The data collected by
the NLTS2 provides post school outcome information including persisted employment held by individuals with disabilities year after year of the study. Parents/guardians were interviewed by telephone. The interviews focused on youth and family characteristics, non-school activities, satisfaction with school programs, and activities after high school. Mail questionnaires were administered to parents who could not be reached by phone (Newman et al., 2010). Wave 5 surveys for parents consisted of questions regarding their son/daughter’s postsecondary employment and/or education experiences. The Wave 5 survey for youth also includes questions on outcomes but is much more involved than the parent questionnaire due to the questions regarding non-academic experiences such as feelings and volunteer work in the community (NLTS2, 2009).

The individuals with disabilities who were able to answer for themselves were asked to complete a telephone interview or mail questionnaire about their experiences and postsecondary outcomes including employment and other outcomes pertaining to enrollment in postsecondary education and independent living. In addition, a school staff person who could report on the characteristics and policies of the schools where at least one research participant attended was surveyed to provide school-level information after the classroom-level information was collected in other surveys including progress toward transition goals and students’ role in the transition planning. School characteristics that were collected (e.g., grade levels served, whether public or private), as well as information about the student body (e.g., size, demographic characteristics, number of students receiving special education services, absenteeism and mobility rates), were collected. Regarding outcomes, graduation rates, college entrance examination participation, and college enrollment were obtained. School-level information was linked to each NLTS2 study member enrolled at a given school. In addition to the obvious availability of data among these
categories, aligning with the disability categories already established by US DOE special education law and policy (IDEA, 2004) enabled this research to generate results with which to advise schools that may be helpful in the design of transition programming that may differ for different groups of students by disability.

**Variables.** The data collected by the NLTS2 provides post school outcome information regarding postsecondary education enrollment and employment. This research aims to identify the impact of changes in IDEA in 2004 by analyzing employment and education outcomes across disability categories in wave 5 of NLTS2 (collected in 2009 when the students were ages 21-25). The following two primary outcomes and predictors associated with disability category and transition programming characteristics were investigated:

a. **Outcome: Postsecondary employment:** Parents and youth were asked about employment (young adult currently has a paid job outside of the home), and employed (out-of-school young adult has worked for pay outside of the home since leaving high school) (See Appendix C).

b. **Outcome: Postsecondary education:** Parents and young adults were asked if the youth was currently attending a postsecondary education institution. They were also asked if the youth had ever attended postsecondary education since attending high school.

c. **Predictor: Disability category:** The following disability categories were used in this research: (1) specific learning disability, (2) speech/language impairment, (3) intellectual disability (previously called mental retardation), (4) emotional disability, (5) hearing impairment, (6) visual impairment, (7) orthopedic impairment, (8) other health impairment, (9) autism, (10) traumatic brain injury, (11) multiple disabilities, and (12) deaf-blindness. These disability categories are consistent with what is delineated in IDEA
for schools (See Appendices A & B). This study separated individuals by disability category because youth receiving special services during their high school careers typically have different secondary school experiences than their neuro-typical peers including less participation in general education classes and increased participation in alternative diploma-track programs, community-based activities, functional academic instruction, unpaid enclave work experiences, and transition programs on college campuses (Baer et al., 2011). The percentages of students in each disability category by grade level are displayed in Table 2. This data, gathered via parent interviews in Wave 1 is organized by grade level rather than by age (NLTS2, 2001). Researchers found that because students have birthdays at various times throughout the year, it was most accurate to keep a table by grade rather than by age.
d. **Predictor: Aspects of transition programing.** Selected aspects of transition planning included in the NLTS2 survey are also predictors in this study. Specifically, in the **Student School Program Survey** (2001), teachers were asked: (1) if the youth with a transition plan received instruction specifically focused on transition planning, (2) if the transition plan specified a course of study to achieve a goal for youth with a transition plan, and (3) the role of the youth in transition planning. Among many survey questions, these three aspects of transition programming were investigated as predictors of occupational and educational outcomes.

**Analytic Approach.** The primary quantitative analysis consists of obtaining percentages of student involvement by each variable by using the data analysis system for the NLTS2.
available at www.nlts2.org. The NLTS2 data provide a multitude of analytical opportunities for researchers and the public to study students with disabilities. In addition, the sampling weights can be used for each subgroup and the nation. This was necessary because there are high incidence disability categories (such as specific learning disabilities) and low incidence disability categories (such as multiple disabilities). This data analysis system allows the user to generate percentages by data source (surveys, questionnaires, and interviews), conceptual area (i.e. school characteristics, special education, course planning), and topic (depending on the conceptual area) (National Longitudinal Transition Survey 2, 2003).

The Student School Program Survey (NLTS2, 2001) addresses “Transition to Adult Life” in section E, page 13-15 via questions addressing the focus of students’ goals in high school as it pertains to transition such as attending college, postsecondary vocational training program, getting competitive employment, sheltered employment, supported employment, living independently, and maximizing functional independence. First, data across disabilities was explored in the NLTS2 from the Parent Survey from 2001 Wave 1 (NLTS2, 2001). The school program survey was administered in Wave 5 (NLTS2, 2009) providing data on planning for transition to adult life (“done”). Higher employment and education enrollment and independent living are indicators of equity, citizenship, and engagement of the individual (Alverson et al., 2010). The Parent/Youth combined survey results conducted in Wave 5 (NLTS2, 2009) provides employment and education outcome data.

Data analyzed included whether the individual across all disability categories was currently employed and/or in college and since leaving high school. These questions address research question 1: What are the percentages of individuals who are employed or participating in post-secondary education by disability category (e.g. specific learning disability,
speech/language impairment, intellectual disability (previously called mental retardation),
emotional disability, hearing impairment, visual impairment, orthopedic impairment, other health
impairment, autism, traumatic brain injury, multiple disabilities, and deaf-blindness)? The seven
tables were generated by indicating all disabilities as the independent variables and the following
survey questions from two NLTS2 surveys (Wave 1, 2001 & Wave 5 2009) as the dependent
variables. The first four survey questions to address the first research question of this dissertation
inquires whether the young adult currently has a job outside of the home, has had a job since
leaving high school, if the young adult currently was enrolled in postsecondary education, and if
the young adult had been enrolled since leaving high school.

There are many other items gathered in this survey but for the purposes of this study, items regarding transition and vocation were selected including whether the youth receives direct
instruction specifically focused on transition planning, if the transition plan specifies the
student’s course of study to achieve the transition goal, and the degree the youth plays a role in
transition planning. This directly addresses research question 2 of this dissertation: Do the percentages of students receiving transition planning features (e.g., whether the youth receives
instruction specifically focused on transition planning, if the transition plan specifies the
student’s course of study to achieve the transition goal, the degree the youth plays a role in
transition planning) differ by disability category?

State Level: Analysis of New Hampshire Department of Education Data

Rationale. Although there has been an overall increase in students with disabilities
attending college and gaining employment, the increase has occurred at a much lower rate for
students with intellectual disabilities in particular (Grigal, Hart, & Migliore, 2011). There has
been an increased focus on high quality transition services for students with disabilities and in
particular for students with intellectual disabilities, due to an increased accountability put on states to comply with Indicator 13 for transition compliance and Indicator 14 as it demands postsecondary outcome reporting (IDEA, 2004). These requirements include the number of students who received services at the time of leaving high school and the enrollment rate of students with disabilities in college and full-time competitive employment. In turn, these requirements have encouraged schools to increase the quality of the transition services to focus on high expectations, person-centered goals that support postsecondary education and employment and “practices that reflect collaboration with external partners, community agencies, and organizations that might be involved in supporting students in their post school environments” (Grigal et al., 2011, p. 5). This evidence-based areas of transition services has resulted in recommendations from researchers regarding transition compliance measures (Grigal et al., 2011).

However, Grigal, Hart, and Migliore (2011) also found that the goal most frequently found in IEPs for students with intellectual disabilities was to work towards independent living (50%) and competitive employment (46%) although only 11% had postsecondary education goals. These results correlate with the predictors found for college and employment in that when students had goals involving an expectation for employment, students were more often employed, and when the goal was supporting college, they were more often enrolled in college programs (Grigal et al., 2011, p. 9). They also found that students involved with Vocational Rehabilitation were more likely to have higher self-esteem and were more likely to be employed following high school with higher earnings (p. 11). Grigal and associates recommend that goals in IEPs reflect high expectations because they are the highest predictors of positive postsecondary outcomes (p. 14). Grigal and associates have determined that the Indicator 13
requirements are evidence-based practice in that they do result in more positive outcomes (2015). In this mixed-methods dissertation, I analyze the Indicator 13 and 14 compliance data in one state (New Hampshire) to provide a comparison between the state and national level of what is working and what is being implemented in schools.

Data analysis conducted at the state-level of this study addresses the third of four research questions:

In the state of New Hampshire, are school level percentages of students employed and in postsecondary education related to:

a. School-level percentages of students in various disability categories?

b. School-level percentage of students in transition planning?

**Data Source.** To satisfy Indicator 13 requirements, IDEA federal regulations indicate that schools must design IEPs that include appropriate measurable postsecondary goals that are updated annually, based on age-appropriate transition assessments, and transition services must reasonably enable students to meet those goals such as by the course of study (IDEA, 2004). Students must be invited to their IEP meetings no later than age 16. In addition, in the NH Rules of Education of Children with Disabilities, if it is determined appropriate by the IEP team, a statement of transition service needs focused on the student’s course of study may be included at age 14 or younger but only required to be established by age 16 (NH DOE Rules, 2014). The state of New Hampshire ensures that districts are complying with Indicator 13 guidelines by randomly selecting 10-12 high schools per year for Indicator 13 compliance monitoring. Schools achieve compliance levels by how many items on the checklist align with the requirements (NH DOE). For the purposes of this dissertation, the data spreadsheets were obtained from the Bureau of Special Education that included the list of compliance percentages per high school.
Although states are required to develop transition plans for students who are eligible for special services per Indicator 13 of IDEA (2004) and report on postsecondary outcomes one year following exit from their high school experience per Indicator 14 (2004), it is challenging to compare data year to year due to a few factors (Gerber et al., 2014, p. 102). The sample from year to year changes due to changing demographics (e.g., gender, disability category, and race); therefore comparing data after policy and/or services change each year threatens the validity of the results. Employment in particular is a variable that is difficult to analyze due to the dramatic change of the scope of job offerings over past years according to researchers (Gerber et al., 2014, p. 103). Follow-up data regarding employment reflect more positive results in healthy economic times and conversely look worse when the economy is experiencing a difficult downturn. In addition, fewer people overall take advantage of postsecondary opportunities when local, state, and federal economies are suffering and, in fact, fewer programs may exist at that time for people with disabilities (p. 103). The scope of employment and postsecondary education offerings evolves from year to year which may affect the data regarding postsecondary outcomes of people with disabilities (Gerber et al., 2014). This dissertation will take these factors into consideration when synthesizing the results in the final chapter.

The New Hampshire Bureau of Special Education requires all districts to participate in disseminating the Postsecondary school Census Survey as does IDEA for all states (2004) in an effort to satisfy Indicator 14 of IDEA regarding employment, education, and independent living outcomes following high school. The state sends districts surveys for every student who formerly had an IEP in high school one year after they left high school through graduating or turning 21, when students are no longer eligible for special education. Districts are responsible for mailing the surveys to the alumni. Results are compiled for the annual IDEA Part B Special Education
In researching postsecondary outcomes of students with disabilities, a positive aspect is that Indicator 14 requires all states to collect postsecondary data as part of the Individuals with Disabilities Education Act (IDEA, 2004; Gerber, Batalo, & De Arment, 2014). States have maximum flexibility in their methods for collecting data which means that data collection is mandated one year after students exit high school but not “prescribed” (p. 103). Authors state that this internal threat to consistency poses problems for research. There is much potential, however, if research can reveal the “effect of its [Indicator 14] procedures and how it affects students with disabilities” (p. 103). In addition, Gerber and associates (2014) state that if the Indicator 14 data could be from two years following high school, it could bring to light more accurate information regarding established post school outcomes particularly because most schools provide above and beyond the DOE requirements for reporting (p. 104). This dissertation considers the implications of utilizing survey data disseminated one year following exiting high school.

**Variables.** The Bureau compiles and analyzes the results from former students who are enrolled in higher education within one year of leaving high school, enrolled in higher education or competitively employed within one year of leaving high school, and enrolled in higher education or in some other postsecondary education or training program; or competitively employed or in some other employment within one year of leaving high school (See Figure 3).

The state of New Hampshire does not disaggregate compliance data by all disability categories as is recommended for the purposes of this dissertation. The results are reported according to the following respondent categories: learning disabilities (LD), emotional
disabilities (ED), intellectual disabilities (ID), all other disabilities (AO), female, minority, dropout, and overall (APR, 2012-2013).

**Figure 3.** Measurement for the Indicator 14 Postsecondary School Outcome Survey.

<table>
<thead>
<tr>
<th>Measurement:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Percent enrolled in higher education = ([# of youth who are no longer in secondary school, had IEPs in effect at the time they left school and were enrolled in higher education within one year of leaving high school] divided by the [# of respondent youth who are no longer in secondary school and had IEPs in effect at the time they left school]) times 100.</td>
</tr>
<tr>
<td>B. Percent enrolled in higher education or competitively employed within one year of leaving high school = ([# of youth who are no longer in secondary school, had IEPs in effect at the time they left school and were enrolled in higher education or competitively employed within one year of leaving high school] divided by the [# of respondent youth who are no longer in secondary school and had IEPs in effect at the time they left school]) times 100.</td>
</tr>
<tr>
<td>C. Percent enrolled in higher education, or in some other postsecondary education or training program; or competitively employed or in some other employment = ([# of youth who are no longer in secondary school, had IEPs in effect at the time they left school and were enrolled in higher education, or in some other postsecondary education or training program; or competitively employed or in some other employment] divided by the [# of respondent youth who are no longer in secondary school and had IEPs in effect at the time they left school]) times 100.</td>
</tr>
</tbody>
</table>


**Analytic Approach.** For the purposes of this study, the 2013-2014 Indicator 13 compliance report and data and Indicator 14 Post School Consensus Survey was utilized (2012 “leavers”) because it consists of the most recent data available at the time of this study. Because the state of New Hampshire only began collecting Indicator 13 and 14 data beginning in 2010-2011, participation in the survey has increased since that year. Utilizing data from the year 2013-2014 provides more data and aligns with the analysis conducted at the qualitative level of this study due to the interviewees exit dates from high school. Former students were interviewed for the qualitative analysis of this study at/around the same age or “leave” date so data could be collected and analyzed at the closest point in time possible as the state level information.

The NH DOE only provides responses for three individual categories and combines the other nine categories in special education when reporting the demographic of responders for
Indicator 14 purposes. Although it is consistent in the literature review and recommendation of this research to identify results by each disability category without combining categories that may be of low incidence, the analysis only has the three categories available which leaves this research question partially unanswered with regards to all disability categories. The NH Bureau of Special Education does not collect Indicator 13 data by disability category or by the role the youth served in the planning (NH DOE, 2013).

A synthesis of outcome data by current and any employment since exiting high school and education enrollment is discussed and compared to the national data and the qualitative data collected from interviews (See Figure 3 above). A secondary descriptive analysis of the data was conducted to determine the potential interplay between the Indicator 13 and 14 compliance percentages of New Hampshire Districts while considering school size and cost per pupil. The Indicator 13 and 14 data was compiled to generate data tables regarding demographic and outcome results as it is required by NH DOE for postsecondary outcome measurements as much as was available. Other percentages and charts obtained for this dissertation were attained from the annual IDEA Part B Special Education State Performance Plan (SPP) and Annual Performance Report (APR) (2004; NH DOE Website). Based on the results of this analysis, two high schools of differing compliance levels were chosen via convenience sampling to pursue qualitative analysis of this study.

**Qualitative Methods**

**School Level: Interviews with educators and former students**

**Rationale.** In his book, *Qualitative Research Design: An Interactive Approach*, Maxwell states “interviewing can also be a valuable way of gaining a description of actions and events - often the only way, for events that took place in the past or for situations to which you can’t gain
observational access,” (p. 103, 2013). Conducting and analyzing interviews provides the opportunity to include educators’ and former students’ perspectives to explain the quantitative outcome data findings regarding what transition planning features in high school might impact postsecondary employment and education outcomes. Seidman (2012) has argued that interviewing “is a powerful way to gain insight into educational and other important social issues through understanding the experience of the individuals whose lives reflect those issues.” It is through interviewing former students and educators that connected results are synthesized for a contextual and rich discussion.

The qualitative analysis of this study aims to address the fourth of four research questions: What transition planning occurs in two large high schools for high school students with disabilities that might explain their postsecondary employment and education outcomes?

**Site Selection.** For the purpose of this study, two large-sized (>1,001 enrolled) high schools were selected from which to conduct purposeful sampling. Large high schools offer more personnel and alumni and therefore have a higher chance of finding willing participants to be interviewed. At the time of the proposal of this study, 20 high schools were in this category (See Appendix E). The districts that included more than one high school (Manchester and Nashua) were eliminated so as to not use the largest districts in the state and to avoid claims of threats to validity due to the resources that might be available or not due to the sheer size of those two districts. The one school that remains a “public academy” that is a partially private school with a public agreement (Pinkerton) was not considered for this study due to the potential resources of that school due to the varied funding sources afforded to private schools. Finally, the high school where the researcher currently is employed (Winacunnet) was also eliminated from the list. The remaining list consists of 13 high schools from which to conduct purposeful
sampling which allowed the researcher to denote that “two large high schools” in New Hampshire were utilized in the study without a high risk of violating the privacy of the educators and alumni. Cost per pupil was also considered to utilize two high schools that have a generally similar funding formula per student. High schools were chosen based on the results of the state level Indicator 13 and 14 secondary analyses. One high school that was found compliant on these indicators and one high school that was found non-compliant in 2012-2013 as determined by the New Hampshire Department of Education were chosen so as to compare the transition planning practices at these districts.

**Participant Selection.** After the study was approved by the Institutional Review Board, the high schools were contacted through the principal to gain approval for participation in the study. The special education director, one special education teacher, and one Transition Coordinator participated in semi-structured interviews at each school (See Appendix D). The high schools were offered a training session to their staff or parent group on the topic of transition as incentive to participate.

To identify former students to be interviewed, the schools that agreed to participate were given letters in stamped envelopes on which to place address labels of alumni from one year prior to the study. The researcher requested to interview three former students from each school through the educators involved in the study. One student who is employed, one who is attending college or training, and one who is not enrolled in school or working were included in the interviews conducted within this study. This process aims to protect the anonymity of the individuals who received special education services while in high school. The letter outlined the parameters of the study and the 5-question semi-structured interview itself, which took less than one hour (See Appendix D). Three young adults from each school were offered a gift card as an
incentive for their time and participation in the study. Participants who were identified in
different disability categories in special education were selected when possible. Due to the
potential limited mental capacity of some of the participants, it was possibly that the parent was
the legal guardian and would be interviewed on their son/daughter’s behalf. Participants’ names
are not used and all identifying information omitted from the discussion of the results to protect
privacy and preserve anonymity.

Assumptions. This study includes interviews of both school faculty and alumni to
understand the transition programming because the assumption is that students and faculty differ
with regard to their perspective and experience in the high school setting.

Analytic Approach. Two interview protocols were prepared: one for former students and
one for educators. The protocol for former students (See Appendix D) includes five questions
regarding their experience transitioning out of high school, if there was a specific aspect of high
school transition planning that they believe influenced career or college plans, if transition
planning activities helped foster an interest in college or careers, and if they have any
recommendations they might give to high schools to better prepare students for their future.
These questions were developed in an effort to answer the third research question regarding what
activities in high school might have had an impact on postsecondary outcomes for students with
disabilities. Six interviews took place and, in two cases, parents who are the legal guardians for
their adult sons/daughters, spoke on behalf of the young adult. The four interviews with the
alumni took place in person at their former high schools (10-20 minutes each) and the two
interviews with parents as guardians were conducted over the phone (30-40 minutes each). Three
interviews were conducted at one of two high schools in southern New Hampshire for a total of
six former student/parent interviews.
The protocol that was developed for educators includes four questions with the last question having three parts regarding their efforts toward influencing youth to achieve their goals, their experience in developing and delivering programs or practices that influence career and college readiness, a description of any practices that directly target the transition to postsecondary plans, and a description of contextual factors of the setting, participant involvement, and supports that might exist in the community to promote transition planning activities (Appendix D.). These questions were created to understand from the educators’ perspective what transition planning is taking place so as to later compare with the actual outcomes of the student interviews and outcomes. All six of these interviews took place over the phone and were 20-30 minutes in length. The three interviewees from two high schools (one special education teacher, one transition coordinator, and one special education director) were from the same high schools where the former student/parent interviews attended high school.

All interviews were recorded and transcribed to preserve the data. The interview transcriptions were analyzed to find recurring topics and connections among the educators and among the young adults. Categories of data were identified and labeled by topics to create an organized system to synthesize and discuss. Identifying categories and organizing topics from transcripts, Seidman (2012) assert, “What is of essential interest is embedded in each research topic and will arise from each transcript,” (p. 118). Demographic information regarding the disability category and transition planning activities the student conducted while in high school are cross referenced with the educators interviewed in the same school. In creating informal profiles of the participants, the researcher “can then present and comment upon excerpts from the interviews thematically organized,” (Seidman, 2012, p. 118). After recurring topics emerged
from coding the transcripts, a discussion was prepared to describe each topic from the staff as well as the parent/student data.

**Summary**

The methods of this three-level dissertation are quantitative (national and state) and qualitative (school level). The first level of analysis was to pull data from two waves of the NLTS2 for national findings. The second state of the analysis was an overview of compliance data as it pertains to transition planning and outcome survey data in New Hampshire. The last stage of data collection and analysis involved interviews with three former students/parents and three educators from two high schools in New Hampshire. The next chapter details the results of the analysis and is organized much like the methods chapter according to national, state, and school levels.
Chapter 4

RESULTS

The first section of this chapter presents the findings of the data tables generated from the NLTS2 data analysis system as it pertains to the first two research questions. In addition, findings from the state level data analysis are reviewed including how New Hampshire performed over two years according to indicator 13 (transition) and 14 (postsecondary outcomes) audits in the school district profiles. Finally, findings from the interviews with educators and former students are presented by recurring topics.

Quantitative Findings

National Level: NLTS2

Employment. Initial results of this chapter are provided to answer the first research question which investigates the percentages of individuals who are employed or participating in post-secondary education by disability category (e.g. specific learning disability, speech/language impairment, intellectual disability, emotional disability, hearing impairment, visual impairment, orthopedic impairment, other health impairment, autism, traumatic brain injury, multiple disabilities, and deaf-blindness). Table 3 presents young adult postsecondary employment and education outcome percentages by disability category. The categories are presented by highest percentage for “currently employed” and “currently enrolled in an education program” (Table 3). In addition, results are provided regarding whether the young adult has been previously employed and previously enrolled in an education program since leaving high school.
Results from the Parent/Young Adult combined survey revealed that 95.8% of students identified with disabilities reported having worked for pay other than around the house since leaving high school (See Table 3). However, at the time of the survey (2009, Wave 5), only 59% of young adults reported currently being employed in a paid job outside the home (See Table 3). This discrepancy may suggest that people with disabilities are attaining paid jobs more readily than sustaining those paid jobs. All of the percentages fall within the range of 70.5% (multiple disabilities reported at the low end of the range) and 98.4% (learning disability reported at the highest percentage) as having worked in a paid job since high school whereas all categories reported results within the range of 29.5% (Deaf-blindness) and 66.7% (learning disability) as currently having a job (Table 3).

Variation in percentages for the current employment of young adults with different disabilities are ranked in descending order in Table 3. Young adults identified with learning disabilities (LD) were the largest percent reporting that they were currently working outside the home in a paying job (66.7%) and at all since high school (98.4%) (Table 3). Young adults with speech impairments and other health impairments were also among the highest who reported currently working (62.8%, & 63.2%) and had worked since high school (97.1% and 97.6%). The results for students with LD, SL, and OHI identifications were consistent across “currently working” and “has worked since high school” in that they were the top three categories for both questions. However, young adults with serious emotional disabilities were among the top group of four categories over 95% who reported having worked since high school (95.4%) and they ranked halfway down the list of twelve categories at only 48.2% as a result of responding that they were currently in a paid job.
The categories of orthopedic impairment, autism, multiple disabilities, and deaf-blindness consistently placed at the lowest percentages on the list on both questions of the survey. However, it is worth noting that young adults with autism were only in 9th place of the 12 categories as having worked since high school (79.5%) yet they fell to the 11th place when asked if they were currently working (32.5%) (Table 3). In contrast, young adults categorized as having multiple disabilities had the lowest percentage of the twelve categories for having worked at some point during high school yet the percentage regarding current paid employment climbed to 9th place (34.7%). Other than the multiple disabilities category, traumatic brain injury was the only other category whose percentage for currently working (5th place at 51.2%) (See Table 3) rose to a higher position than that for having worked since high school (6th place at 90.3%).

**Table 3. Young Adult Employment & Education Outcome Percentages by Disability Category.**

**NLTTS2 Question**

<table>
<thead>
<tr>
<th>Employment</th>
<th>Total</th>
<th>LD</th>
<th>OHI</th>
<th>SLI</th>
<th>HI</th>
<th>TBI</th>
<th>ED</th>
<th>VI</th>
<th>ID</th>
<th>MD</th>
<th>OI</th>
<th>AUT</th>
<th>D/B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently</td>
<td>59</td>
<td>66.7</td>
<td>63.2</td>
<td>62.8</td>
<td>56.4</td>
<td>51.2</td>
<td>48.2</td>
<td>41.5</td>
<td>37.2</td>
<td>34.7</td>
<td>33.1</td>
<td>32.5</td>
<td>29.5</td>
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<tr>
<td>Previously</td>
<td>95.8</td>
<td>98.4</td>
<td>97.6</td>
<td>97.1</td>
<td>94.2</td>
<td>90.3</td>
<td>95.4</td>
<td>86.4</td>
<td>88.9</td>
<td>70.6</td>
<td>75.9</td>
<td>79.5</td>
<td>75.1</td>
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</table>

**Postsecondary Education**

<table>
<thead>
<tr>
<th>Postsecondary Education</th>
<th>Total</th>
<th>HI</th>
<th>VI</th>
<th>OI</th>
<th>SLI</th>
<th>LD</th>
<th>OHI</th>
<th>TBI</th>
<th>ED</th>
<th>AUT</th>
<th>MD</th>
<th>ID</th>
</tr>
</thead>
<tbody>
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<td>Currently</td>
<td>14.7</td>
<td>24.4</td>
<td>23.9</td>
<td>22.7</td>
<td>22.5</td>
<td>19.5</td>
<td>16.9</td>
<td>16.2</td>
<td>14.3</td>
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<td>12.4</td>
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</tr>
<tr>
<td>Previously</td>
<td>58.4</td>
<td>73</td>
<td>67.8</td>
<td>53</td>
<td>59.8</td>
<td>65.3</td>
<td>65.2</td>
<td>64.7</td>
<td>60.5</td>
<td>51.4</td>
<td>39.6</td>
<td>28.9</td>
</tr>
</tbody>
</table>

NLTTS2=National Longitudinal Transition Survey-2; LD=Learning Disability; SLI=Speech Language Impairment; HI=Hearing Impairment; VI=Visual Impairment; OI=Orthopedic Impairment; OHI=Other Health Impairment; AUT=Autism; TBI=Traumatic Brain Injury; MD=Multiple Disabilities; D/B=Deaf/Blind

**Postsecondary Education.** Across all students with disabilities, 14.7% reported currently attending postsecondary education and 58.4% reported attending postsecondary education at some point since leaving high school (Table 3). The discrepancy in these figures may suggest
that students with disabilities are not attending full-time, 4-year programs after high school because the survey was administered during the four years after students exited high school at ages 17-21 (Newman et al., 2011). The percentage of students across disability categories enrolled in a postsecondary education program is provided in an effort to address part of the first research question of this dissertation.

The category of students identified as having hearing impairments and visual impairments had the highest percentage of all twelve categories for currently attending postsecondary education or attending at some point after exiting high school. Students with hearing impairments are at the top of the list for currently attending postsecondary education and for attending at any point since leaving high school (24.4%, 73%) and the percentage for students with visual impairments were second across disability category for both questions at 23.9% and 67.8% (Table 3). The four categories reporting the lowest enrollments in postsecondary education institutions at the time of the survey and at any time since high school were of the same order on each of the two questions: serious emotional disturbance, autism, multiple disabilities, and intellectual disabilities. The percentage for students with intellectual disabilities placed at the lowest position of the twelve categories at 2.3% as currently attending postsecondary education and 28.5% as having attended at some point since exiting high school.

The percentage of students in the deaf-blindness category is in the third highest position for currently attending postsecondary education (22.7%) which is well over the average among all disabilities at 14.7% while the results of this category dropped to the 8th place for “has ever attended postsecondary education since exiting high school” due to only 53% of students responding “yes” in that category. Similarly, 22.5% of students with orthopedic impairments reported as currently attending college (4th position among twelve categories) however they
dropped to 7th place due to only 59.8% who responded as ever attending a postsecondary education institution since leaving high school (Table 3).

The results of the data generated regarding students with disabilities employed or attending a postsecondary institution vary by disability however a percentage of students within every disability category responded as having been employed and/or attending a postsecondary institution since leaving high school. Although it is to be expected that the overall percentage of youth currently enrolled in education programs differs from previously enrolled due to the 2-year/4-year nature of education programs (14.7% & 58.4%), the discrepancy between the currently and only previously employed suggests that youth with disabilities are unsuccessful in maintaining employment (59% & 95.8%). It an effort to understand what may have contributed to these outcomes, it is important to investigate the activities during high school transition planning. Features of transition planning are therefore addressed in the subsequent section to address the second research question of this dissertation.

**Transition Planning.** The overall impressions of table 3 provided in the previous paragraphs of this section provide a background for addressing the first research question. In order to address the second research question (Do the percentages of students receiving transition planning features (e.g., whether the youth receives instruction specifically focused on transition planning, if the transition plan specifies the student’s course of study to achieve the transition goal, the degree the youth plays a role in transition planning) differ by disability category?), The following discussion compares and contrasts the data within tables 3 and 4.
Table 4. Percentages of Students Reporting Transition Planning Features by Disability Type

**NLTS2 Question**

**Youth with Transition Plan Received Direct Instruction focused on Transition Planning**

<table>
<thead>
<tr>
<th>Total</th>
<th>ID</th>
<th>AUT</th>
<th>MD</th>
<th>TBI</th>
<th>ED</th>
<th>HI</th>
<th>LD</th>
<th>VI</th>
<th>D/B</th>
<th>OI</th>
<th>SLI</th>
<th>OHI</th>
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<tr>
<td>64.5</td>
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<td>63.6</td>
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<td>61.8</td>
<td>59.7</td>
<td>59.6</td>
<td>55</td>
</tr>
</tbody>
</table>

**Transition Plan specifies Course of study to achieve goal**

<table>
<thead>
<tr>
<th>Total</th>
<th>LD</th>
<th>TBI</th>
<th>ED</th>
<th>ID</th>
<th>SLI</th>
<th>MD</th>
<th>OI</th>
<th>OHI</th>
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<td>70.8</td>
<td>69.8</td>
<td>68</td>
<td>66</td>
<td>64.4</td>
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</table>

**Youth Took Leadership Role in Transition Planning**

<table>
<thead>
<tr>
<th>Total</th>
<th>VI</th>
<th>HI</th>
<th>OI</th>
<th>LD</th>
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<td>2.6</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

NLTS2=National Longitudinal Transition Survey-2; LD=Learning Disability; SLI=Speech Language Impairment; ID=Intellectual Disability; ED=Emotional Disability; HI=Hearing Impairment; VI=Visual Impairment; OI=Orthopedic Impairment; OHI=Other Health Impairment; AUT=Autism; TBI=Traumatic Brain Injury; MD=Multiple Disabilities; D/B=Deaf/Blind

Table 4 includes three transition planning features by percentages: youth with transition plan received direct instruction focused on transition planning, transition plan specifies course of study to achieve goal, and youth took leadership role in transition planning. According to the data, students with the lowest percentages pertaining to employment and postsecondary education enrollment were the most likely to respond that they received instruction specifically focused on transition planning (Tables 3 & 4). Students in the categories of intellectual disability, autism, and multiple disabilities (the least likely to be currently employed or at college) were the top three percentages among twelve categories that reported having a transition plan and received instruction specifically focused on transition planning (Table 4). In contrast, the percentage for students with learning disabilities (63%) was the lowest for receiving instruction specifically pertaining to transition planning (Table 4) however they were the most likely to have
had a job since high school had the highest percentage of any category for this question (Table 3).

Students with an intellectual disability (ID) in particular had the highest percentage for receiving specific transition planning instruction however they were the least likely to respond that they were currently going to college or had ever attended college (Tables 3 & 4). In addition, students with ID were in 7th and 8th place for being employed currently or employed at all since high school (Table 3). The students who were the least likely to report receiving transition instruction (OHI) (Table 4) were in second place for being employed currently or since high school (Tables 3 & 4) although they only placed 7th and 5th with regards to currently enrolled in college or since high school (Table 3).

The range students who responded that their transition plan specifies a course of study to achieve their postsecondary goal (“yes” to “no”) across twelve disability categories is narrow: 75.6%-64.4% (Table 4). The average percent of all students who answered positively to this question was 74.1 with students with a learning disability with the highest percentage and lowest percentage being students with a hearing impairment.

Patterns of employment and college enrollment rates and the role of the youth in transition planning also varies by disability category according to the Wave 1 Student School Program Survey of NLTS2 (Table 4). The students with a visual impairment most often took a leadership role however the percentage of current or previous employment scales revealed below average participation. Regardless of participation, the percentage of students with visual impairments is the second highest for currently or attending college at one time since high school (Tables 3 & 4). Students who were the least likely to attend transition planning meetings and therefore took no role in the process were students with multiple disabilities and autism (Table}
4). Students with autism and multiple disabilities are also the students who have the lowest percentages of employment and college enrollment (Table 3).

In summary, of the categories with a sufficient number of respondents, the students who took a leadership role in their transition planning the most often were the students with visual and hearing impairments. These two categories were the most enrolled in college (Table 3). In addition, although there is a narrow range of who received a course of study pertaining to their transition, the students who received the most direct instruction in the area of transition planning are the students with the most significant disabilities (Table 4).

Students who receive the most instruction do not necessarily have the most successful outcomes. Although these findings seem to be pointing to a conclusion that direct instruction is ineffective, it could be surmised that the instruction is not enough in and of itself to be effective for students with the most involved disabilities. It is simultaneously true that students with ID, D/B, and MD might require more instruction regarding postsecondary opportunities due to the significance of their disabilities and their outcomes will be low. These results reveal that transition planning features (direct instruction, course of study, and student role) do indeed differ by disability category.

**State level results: New Hampshire Department of Education Data**

**Indicator 13: Transition.** The third research question of this dissertation is whether, in the state of New Hampshire, school level percentages of youth employed and in postsecondary education related to school-level percentages of students in various disability categories and/or school-level percentage of students in transition planning. To address this question, I have obtained the Indicator 13 compliance data regarding transition planning and Indicator 14 survey
data regarding postsecondary outcomes. I provide a review of what New Hampshire provides for findings in an effort to answer my third research question.

The state of New Hampshire defines Indicator 13 of IDEA as:

Percent of youth with IEPs aged 16 and above with an IEP that includes appropriate measurable postsecondary goals that are annually updated and based upon an age appropriate transition assessment, transition services, including courses of study, that will reasonably enable the student to meet those postsecondary goals, and annual IEP goals related to the student’s transition service needs. There also must be evidence that the student was invited to the IEP Team meeting where transition services are to be discussed and evidence that, if appropriate, a representative of any participating agency was invited to the IEP Team meeting with the prior consent of the parent or student who has reached the age of majority (http://education.nh.gov/instruction/special_ed/spp.htm).

Of the fifteen New Hampshire high schools that were randomly chosen to be monitored for Indicator 13 compliance in 2011-2012, only two were found non-compliant (NH DOE, 2013). The New Hampshire Department of Education monitors Indicator 13 compliance according to a checklist that includes all of the requirements that are detailed in the definition above (NH DOE, 2013). When these two schools were reviewed the following year per the NH DOE rules for non-compliant schools, they were then found 100% compliant along with the next round of fifteen high schools which were also found to be 100% compliant (NH DOE, 2013). Part of the monitoring process involves the NH DOE providing professional development for districts that includes a representative from the NH DOE Bureau of Special Education giving a presentation to the high school staff regarding all of the requirements to be compliant with Indicator 13 (NH DOE, 2013). As outlined in Figure 4 below, in the case that a district does not achieve 100% compliance, a second visit that entails an audit of another selection of files and so on until the district achieves complete compliance. It is typical, however, for districts that are not compliant after the first review to correct mistakes and achieve compliance in the second visit by
the Special Education Bureau (NH DOE, 2013). This is due to the thorough professional
development and involvement on the part of the NH DOE that most schools score as compliant
and thereby providing data that has zero variation (all but two being non-compliant in 2012).
Although this is encouraging for the state of New Hampshire because it means that all Individual
Education Plans include the required features of Indicator 13 definition, it does not provide any
variation for the purposes of the third research question for this dissertation. In other words, no
variation is evident in transition planning which could otherwise be related to disability category
or postsecondary outcomes however the potential relationship will be explored at the state level
with the data obtained from the Post school Consensus Survey for Indicator 14.

<table>
<thead>
<tr>
<th>Statement from Response Table</th>
<th>State’s Response</th>
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<tbody>
<tr>
<td>Because the State reported less than 100% compliance for FFY 2011, the State must report on the status of correction of noncompliance identified in FFY 2011 for this indicator. When reporting on the correction of noncompliance, the State must report, in its FFY 2012 APR, that it has verified that each LEA with noncompliance identified in FFY 2011 for this indicator: (1) is correctly implementing the specific regulatory requirements (i.e., achieved 100% compliance) based on a review of updated data such as data subsequently collected through on-site monitoring or a State data system; and (2) has corrected each individual case of noncompliance, unless the child is no longer within the jurisdiction of the LEA, consistent with OSEP Memo 09-02. In the FFY 2012 APR, the State must describe the specific actions that were taken to verify correction.</td>
<td>NH has verified that each LEA with noncompliance identified in FFY 2011 for this indicator (1) was corrected within one year. Furthermore, NH verified that the two LEAs who had noncompliance during FY 2011: (1) are correctly implementing the specific regulatory requirements based on a review of updated data that was subsequently collected through on-site monitoring (each LEA met 100% compliance during their second on-site review); and (2) has corrected each individual case of noncompliance, unless the child was no longer within their jurisdiction, consistent with OSEP Memo 09-02. Specifically, NH required the two (2) LEAs who did not meet 100% compliance during the FY 2011 on-site visit, to correct each instance of child-specific noncompliance within 60 days of receipt of written notification of noncompliance. In addition, NH completed a second, follow-up on-site monitoring visit with each of the two LEAs within one year from the original data of their FY 2011 on-site visit, to collect and review subsequent, updated data to ensure that each of the two (2) LEAs were correctly implementing the regulatory requirements.</td>
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Figure 4. NH DOE Response to results of the Post School Outcome Survey New Hampshire Department of Education, Bureau of Special Education website: education.nh.gov/instruction.
The overall compliance for Indicator 13 in New Hampshire according to the selection of school districts in this one given year (2011-2012) suggests that transition planning may not be related to disability category or postsecondary outcomes. In contrast, as evidenced by the NLTS2 results, the role of the youth in transition planning and their outcomes do vary by disability category (Newman et al., 2011). The NH Bureau of Special Education does not collect Indicator 13 data by disability category or by the role the youth served in the planning (NH DOE, 2013). Therefore, to determine how students’ employment and postsecondary education enrollment outcomes are related to disability categories at the school level in the state of New Hampshire, the data regarding all students on the whole is analyzed as collected by Indicator 14: Post School Consensus Survey (Tables 5 & 6).

**Indicator 14: Post school Outcomes.** The NH DOE identified the “Measureable and Rigorous Target[s]” for results of the Post School Outcome Survey as outlined in Figure 5. The first target is that young adults are enrolled in higher education or in some other education or employed competitively or otherwise within one year of leaving high school at an average rate of 86.6% in 2012 (Figure 5). More specifically, 74.5% of youth who had IEPs in high school are targeted to be enrolled in higher education or only competitively employed in the second category. Only 47.2% of youth who are identified as having an educational disability in New Hampshire are targeted to be enrolled in higher education within one year of graduating from high school (Figure 5).
Measurements are more specifically separated by higher education, competitive employment, other education/training, some other employment, and not engaged to outline the results of the survey in 2012 as shown in Table 5 as found in the New Hampshire State Performance Plan (NH DOE website: http://education.nh.gov/instruction/). Respondents (school-level percentages) reported to be enrolled in higher education at an average of 47.4% and in other postsecondary education/training at 5.7%. Only 22.5% of respondents reported to be competitively employed and 7.2% in some other employment. Indicator 14 measures A, B, and C (defined in Figure 5) are clustered within Table 5 as including all of the segments of the chart with the exception of “not engaged” which was reported at 17.2%. To determine if the employment and higher education enrollment outcomes are related to disability categories, the results as outlined in Table 5 will be discussed as they pertain to demographics which are provided subsequently in Table 6.
The disability categories that are provided by the New Hampshire Post School Consensus Survey data include learning disabilities (LD), Emotional Disturbance (ED), Mental Retardation/Intellectual Disability (ID), and all other disability categories combined (AO) (Table 6). Although it is consistent in the literature review and recommendation of this research to identify results by each disability category without combining categories that may be of low incidence, the NH DOE only provides responses for three individual categories and combines the other nine categories in special education when reporting the demographic of responders for Indicator 14 purposes (Table 6). This is unfortunate because of the 209 responders, 78 identified as having a disability as something other than LD, ED, or ID. The only higher responding group of students were those who identified as having learning disabilities (98). Students with
emotional disturbances only responded 16 times and the same for students with intellectual disabilities (Table 6). Students with learning disabilities are the most represented group (47%) of the responders who completed the Post School Consensus Survey. Although the demographics of the responders are available (Table 6), the outcome data collected by the NH DOE (Table 5) is not available by disability category.

Table 6

Response Rate by Demographics Chart

![Post School Consensus Survey Respondents by Disability Category]


In summary, New Hampshire data that was collected in 2011-2012 regarding indicator 13 compliance was at 100% with the exception of two schools (NH DOE, 2013). The two schools in question were deemed compliant the following year. For the purposes of this study, it was therefore not possible to select two sites for the qualitative portion with one compliant and one non-compliant. In addition, although percentages are available regarding post school outcomes for all of the students with disabilities who returned the Post School Outcomes Survey as
required by indicator 14 (Figure 5 & 6), the disability categories are not fully stratified leaving the third research question in this study partially unanswered.

**Qualitative Findings**

*School Level: Interviews with staff and former students*

To address the last research question of this dissertation, regarding what transition planning occurs in two large high schools for high school students with disabilities that might explain their postsecondary employment and education outcomes, I identified two high schools in New Hampshire wherein I could interview three educators and three former students each for a total of twelve interviews. As explained in chapter 3, two large high schools were chosen based on size, cost per pupil, and socioeconomic percentages. Both schools have over 1,000 in enrollment (large school: 1,100 and larger school: 1,300) however differ with regards to cost per pupil (approximately $14,000 and $11,000) and percentage of students that receive free or reduced lunch (20% and 40% respectively). Both schools have a transition coordinator however the position at the smaller school does not provide direct service to students. The transition coordinator at the larger high school is in charge of an entire program that delivers a transition program for students with intellectual disabilities that involves opportunities in the community and many career exploration activities to prepare students for life after high school.

*Overview of Interview Results*

As displayed in table 7, educators discussed several aspects of transition planning features in high school as positively impacting their students’ lives including career and college preparation and exploration activities, connecting families with adult service agencies, community experiences, and regular education offerings. Educators from the smaller school described in-school activities to satisfy Indicator 13 requirements and, in contrast, educators from the larger,
less-funded school stressed the importance of community experiences as crucial to the transition planning process. The stronger focus on community experiences for students among the educators at the larger, less funded school may be attributed to the need for a less funded school to depend on community resources over costly alternatives such as additional positions or classes in the high school setting.

Table 7

Interview Results

<table>
<thead>
<tr>
<th>Larger School</th>
<th>Smaller School</th>
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<tr>
<td>* Educators</td>
<td>* Educators</td>
</tr>
<tr>
<td>- Transition planning</td>
<td>- Transition Planning</td>
</tr>
<tr>
<td>- Career exploration &amp; preparation</td>
<td>- Regular Education</td>
</tr>
<tr>
<td>- College exploration &amp; preparation</td>
<td>- Career Exploration</td>
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<tr>
<td>- Community experiences</td>
<td>- Career Preparation</td>
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<tr>
<td>- Regular education</td>
<td>- Direct Instruction</td>
</tr>
<tr>
<td>- Connecting to adult agencies</td>
<td></td>
</tr>
<tr>
<td>* Students/Parents</td>
<td></td>
</tr>
<tr>
<td>- Career Exploration activities</td>
<td></td>
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<tr>
<td>- Community Opportunities</td>
<td></td>
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<tr>
<td>- Connecting to adult services</td>
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<tr>
<td>- Course of study</td>
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<tr>
<td>- Social Opportunities</td>
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</table>

Students (and their parents) from the larger school attributed career exploration activities, internships and part-time jobs, social opportunities, and the connection to adult service agencies to productive lives after high school. Students from the smaller school cited the career exploration and preparation in-school as contributing to their knowledge pertaining to job seeking skills. Students mentioned that practicing interview skills was helpful when they were looking for part-time employment following high school however none of the three students
from the smaller school were employed at the time of the interviews which may have been due to a lack of connections to community in contrast to the larger school.

**Educator Interviews**

The staff interviews addressed the fourth research question seeking to understand what transition planning occurs in two large high schools for high school students with disabilities that might explain their postsecondary employment and education outcomes. The interviews were conducted over the phone and lasted approximately 15-30 minutes. The staff consisted of a director, transition coordinator (one directly delivers programming for students and one who does not), and special education teacher/case manager from each school.

Participants in the staff interviews were interviewed individually and asked to answer the following questions:

1. Describe your efforts toward influencing youth to achieve their goals after high school.
2. Describe your experience in developing and delivering programs or practices that influence college and career readiness.
3. Are there specific practices that directly target the transition to a career or to college?
4. What contextual factors describe your program?
   a. Setting, community type, delivery mode
   b. Participation level
   c. Structural supports such as partnerships, funding, established longevity

Recordings of the interviews were transcribed with each interview transcription coded separately. The interviews were read and then meaningful sections of text were highlighted and then marked with key terms as recommended by Seidman (2012). The major topics were labeled
using the most descriptive terms that the interviewees stated and categories emerged due to the most commonly repeated topics in transition.

In order of prevalence in the transcripts, the recurring topics from the staff interviews included:

1. Transition planning
2. Career exploration & preparation
3. College exploration & preparation
4. Community experiences
5. Regular education
6. Connecting to adult agencies

The following sections discuss the topics with supporting evidence from the staff interviews. No descriptive indicators will be associated with the quotes to protect the anonymity of the respondents.

**Transition Planning.** The activities involved in the special education process of transition that includes transition interviews, assessments, meetings, and goal-setting captured the most frequent comments in the staff interviews. A special education director attested that “all goals in the IEP should be about transition in high school,” “transition services should be written to support the goals,” and “all of the work that is done with students should be to help the student achieve the goal.” The transition planning process begins at the 8th grade transition meeting into high school. High school special education teams explain to the incoming freshmen and their parents that the high school IEP will be focused on postsecondary goals and how to get there. Annual transition assessments are required by special education policy (IDEA, 2004) that may include formal and/or informal assessments such as transition interviews to keep the team
informed of a student’s interests and aptitudes in a particular field. The transition planning process begins with what is required for exploration (interviews, assessments, activities in the IEP) but expands from there as far as what the high school has in place to offer students as a means to prepare to achieve their postsecondary goals.

Both special education directors clearly explained the transition process as required by Indicator 13 including transition assessments, course of study, and annual goals. The transition coordinators and special education teachers corroborated the thorough explanations provided by their supervisors however not as rich in explanation. It was evident that this phenomenon was occurring due to the directors’ role in the school which allows more exposure to department and school-wide planning. In addition, the directors had more longevity in the school setting. Transition coordinators described transition planning in their schools however, predictably, the transition coordinator that works directly with students had much more experience and could therefore provide examples of what transition planning (and with regards to all activities) takes place. The transition coordinator at the school with a lower per pupil funding level explained that he is in charge of an integrative program for students with significant disabilities. The transition coordinator at the higher funded school works in the school administrative unit (SAU) office.

**Career Exploration & Preparation.** The staff interviews revealed that “career exploration through assessments and job shadows” were the most common and effective in identifying and preparing students for their chosen career fields. A special education teacher stated that they “try to tease out exactly what the student is interested in and then prepare them for it with internships and job shadows in the community.” They start with the “seed” idea of what a student’s career assessment reveals, work with the student to write goals around exploring and preparing for that career and connect the student with a community partner who currently
has that position. Career exploration consists of additional activities explained in subsequent categories: community experiences and regular education.

The three educators at the larger, less funded school were consistent in their responses regarding the variety of career exploration and preparation activities that are conducted with students with disabilities. The three educators at the smaller school thoroughly explained the activities that are conducted at their school however it was evident that this school offers fewer opportunities for students in the community and in the building to prepare for careers after high school. The smaller school had half the number of families who qualified for free/reduced lunch. It could be the case that families in this smaller district have more resources in the home and, as a result, apply less pressure on the school to provide opportunities for students in the community.

**College Exploration & Preparation.** To initially prepare for college, directors and teachers stated that the special education team works with students to make sure they have the appropriate accommodations on the district standardized tests and SATs for college applications. For students going to college, the teachers stated that frontloading skill training in studying, taking notes, and test-taking benefits students because it allows for more practice at the high school level before going to college when the rubber hits the road. In addition, teachers stated that teaching the skills early on in high school and then backing off fosters independence and self-advocacy. Preparation for college is “a little different because only accommodations are allowed at the college level. There is no specialized instruction so students need to learn how to self-advocate for their accommodations and be aware of what tools have helped them to succeed in the past” according to the director at the smaller high school. The special education teacher from the smaller school revealed that relationships with local community colleges benefit students with disabilities due to the varied support services that are often offered at these
institutions. “What it comes down to is believing in students, believing in their ideas and dreams, and then connecting them to creative ways for them to prepare to achieve their goals.”

College exploration and preparation was markedly less than that for career planning. It is true that fewer students with disabilities go to college than are employed upon exiting high school (Houtenville et al., 2015), however, it could be true due to the lack of college programs for students with more involved disabilities in the area. Students with specific learning disabilities or other disabilities that do not impact cognitive functioning are attending community colleges at higher rates (Newman et al., 2011). Regardless of what is available, the special education teachers both reported that they work hard to prepare students for their goals that must include college and career transition plan goals in the IEP.

**Community Experiences.** Teachers reported, “We’re big on trying to get involved in the community. I try and talk to kids into getting a job and getting involved in a club group, organization, a sport, or something within the community…it’s difficult but we really try to hook them up with as many services as we can out of here.” Community involvement is imperative to the career exploration and preparation process because their interests lead to a career path. “Mostly kids have had the exposure of going to the vet with their parents [for example] and having their dog worked on or the cat’s nail trimmed, or whatever. They don’t really have a deep understanding of the path that led that person who’s doing the work at the vet, what they had to do” according to the transition coordinator at the larger school. Teachers work to find students practical knowledge and practical job skills in the community so that in the future a potential employer might say “Okay, this person is doing the jobs that we ask them to do. Let’s ask them to take on more responsibilities that lead to a better career path.” Valuable skills that can be transferred from one experience to another still contribute to a student’s employability for the
Those transferable skills will apply to any type of job that the person will be exposed to as they get older and older.” Transition coordinators reported that cultivating relationships with businesses and organizations in the community create resources for students down the road. Community partners are very willing to work on creating meaningful experiences for students in the programs for students with disabilities as one teacher stated, “…the people that I’m working with in our community are more than accommodating for the things that we ask them” as stated by the transition coordinator at the larger school. Special education directors stated that the more students are involved in the community, the smoother the transition will be to adult services because New Hampshire has a community-based adult service program in place for students who are eligible and approved for funding.

It was clear that the community involvement was prevalent within the program at the larger high school as stated by the transition coordinator from that school. The foundation of that program involves activities that will prepare students for their adult service programs that are community based in New Hampshire. These activities include learning the bus routes by physically riding the bus on a regular basis, participating in volunteer activities, and gaining competitive employment. While educators from the smaller high school reported a variety of transition activities, opportunities in the community were not mentioned. This lack of community involvement may be the reason the students from this district were not currently employed.

**Regular Education.** Differentiated diplomas, Career Tech Ed (CTE), guidance department activities, and online programs such as Naviance were some of the activities educators reported as effective pieces of a high school program that develop all students’ college and career readiness. A major topic in both teacher interviews was how regular education may be addressing readiness for all students and how students with disabilities are included in that
curricula. Part of the transition process is to connect students’ course of study with their postsecondary transition goal(s) when available according to educators at both schools because CTE is based out of both schools. For example, if a student is interested in becoming a teacher, she would be encouraged to take beginning education classes if offered as electives in high school. If CTE programs are available in a student’s area of interest, they are often extremely beneficial when it comes to applying for college programs and preparing for careers according to interviews with staff. Students may begin with exploratory career tech classes that would precede the typically offered two-year CTE programs for juniors and seniors. A director stated, “. . . we really try to stay in line with what the general population is doing especially in regards to college, or preparing kids, that they follow the curriculum, and you have realistic accommodations. We don’t really do anything special that’s not offered for other kids . . . there are lots of classes offered here.” Students also have access to all of the extra activities that may assist in reaching their goals after high school such as job fairs, guest speakers, and internships when available. This topic was consistent throughout the interviews with educators from both schools which could be due to the CTE programming available at both locations.

Connecting to Adult Agencies. The transition coordinators had the most input regarding the actual transition from high school life to adult life which can involve adult agencies. In New Hampshire, students with the most significant disabilities may be eligible for adult agency funding for a community-based program or even a residential program. It is required of special education teams to invite adult agency representatives (most commonly Vocational Rehabilitation and the area agency) to IEP meetings when appropriate and/or when the parent has requested they be invited. (NH Rules, 2014) Coordinators stated “We usually invite a member of the local area agency to come join us at the meetings. We try to start those into the
sophomore, junior year and have a good understanding of what types of services or what types of goals that the students have for when they’re done with their traditional school-day program. We really have a good idea of what people have for goals.” Connecting many students with Vocational Rehabilitation is key for continuing the employment search and support after high school is over according to the staff from both schools. Directors also connect students with community mental health agencies if appropriate. All of these connections are part of the transition planning process for students with disabilities.

**Former Student/Parent Interviews**

The student interviews also addressed the last research question regarding transition activities in high school that may have contributed to postsecondary outcomes. I interviewed three students from one high school and one student and two parents (who spoke on their child’s behalf) from the other school. The parents are the adult students’ legal guardians so I interviewed them without the student present at their request. The interviews with students were conducted in person and lasted 10-20 minutes. The interviews with two parents were 15-30 minutes in length and were conducted over the phone. Participants in the student/parent interviews were interviewed individually and asked to answer the following questions:

1. Describe your experience transitioning out of high school.

2. Is there a specific aspect of high school or event that influenced your career or college plans?
   a. Please explain any transition activities:

3. Describe in your own words the impact transition planning in high school had in preparing you for the transition to a career or college.
4. Did transition planning activities help foster your interest in taking additional course work to provide the professional skills needed for your future career? Please explain.

5. What are other things high schools could do to better prepare students for their future?

**Career Exploration Activities.** The main topics in student interviews involved exploration and preparation for employment. Students attributed finding jobs due to the direct help from teachers and transition coordinators involving looking for jobs, applying for jobs, and practicing interviewing. One student stated, “They told me what I was supposed to be expecting and what I should go about doing in order to prepare for work.” This student continued by explaining, “They [teachers] helped me grow and be more independent and more confident in myself.” More than one student mentioned the building of confidence as a result of transition planning activities in high school.

Part of the career exploration and preparation activities that were prominent in interviews involved community volunteering and employment opportunities. Parents attributed smooth transitions to their teens trying out short-term job placements in the community. The teachers “began to expose the students to different vocational experiences, so that I think he very quickly would say ‘I don’t want to do that,’ or ‘I don’t like that.’ He did not like making boxes at Stonewall Kitchen and the teacher would say, ‘okay, we tried that, let’s try something else.’ It ended up he flourished at the grocery store.” It is through the exploration that students who have communication barriers due to the disability can identify what they like and don’t like to do. The transition coordinators in the high schools are the facilitators of this trial and error process. One parent stated, “…as part of his high school program, he had gone to Hannaford because he was interested in Hannaford. He loves it. He loves food. He was able to volunteer there during high school and we advocated to turn that into a job when he turned 21.” “They experimented with a
lot of different volunteer options to get to that point and volunteering at the hospital turned out to be the best fit for him,” according to another parent.

**Course of Study.** Students cited participation in career-focused classes such as in CTE and electives that helped to rule out particular careers from both schools. One student from the smaller school explained that she participated in an early childhood teacher program wherein students, “go to a school for preschoolers and first graders, second graders. You hang out with them for an hour, and you help them with their homework. You do snacks with them. You do art projects with them.” The student explained that they originally wanted to be a preschool teacher but then decided to change the career to pursue after actually practicing the career in the high school setting. Ruling our career choices is also a very valuable opportunity according to students. Students reported being currently employed and others reported that they were job seekers at the time of the interview.

**Connecting to Adult Services.** Although the former students did not mention the link between high school and adult service agencies, both parents highlighted this transition in interviews. One parent stated that she was informed about the options available through her area agency due to a workshop she attended. Another parents stated that her high school introduced her to some of the options after high school however it is the parent’s right and decision whether to involve adult agencies in the IEP process. One parent added, “I’ll start by saying that our area agency, well-intentioned people, but was not what I would say helpful in the transition process. They were helpful for the guardian process but as they came to IEP meetings, there became a void of information due to being on the ‘wait-list’. We became frustrated with our area agency.” In addition, parents mentioned that Vocational Rehabilitation was at the table as an option for employment support after high school. One parent stated, “Vocational Ed was at the table too
and they were kind of confusing to me too because they come in for brief periods of time and then leave. When you have a child that is not going to improve that is not the answer for job training. He’s going to constantly need a job coach. Again, through advocacy and sitting with our area agency who threw out meaningless things at us, we just said, ‘No. This is what our son needs,’ and we were able to get a transition program and budget that provides the level of support that our son needs.”

Social Opportunities. A notable commonality across parents’ answers included the importance of fostering social interaction in transition planning and to keep social activities integrated into their adult children’s lives. One parent stated that her son “longs for friendships but he needs to remember that some people might appear to be your friends but he shouldn’t assume that. Some people will take advantage of you.” Parents hailed social activities such as getting former students together for various social activities is crucial for the young adults’ lives going forward. One parent expressed her gratitude that teachers “keep him informed about things that are happening so that even now as an adult he has the opportunity to be in social settings which is really important.”

In summary, the staff described what occurs and students and parents described their experiences during the high school as it pertains to preparation for adult life in college and careers. High school is described by both groups as an important place to practice job seeking and maintaining skills. The national and state requirements for transition as well as the educators’ beliefs in what is regarded as best practice in transition were hailed as imperative for student success after high school. Additionally, both groups credit community experiences and direct instruction around teamwork and independent skills training to be influential toward positive postsecondary employment outcomes. Parents attested that the integration of community
exploration and social activities as a result of the transition planning were important to their young adult’s success in postsecondary life.

Summary

The results from this mixed-methods study vary across national, state, and local levels of data. The NLTS2 tables reveal that the most employed young adults are those with learning disabilities, other health impairments, and speech and language impairments, in that order. Young adults with hearing impairments, visual impairments, and deaf/blindness (Table 3) had the highest incidence of postsecondary enrollment. There were no common disability categories within the top three percentages in the three survey questions regarding transition planning (Table 4). Students with intellectual disabilities, autism, and multiple disabilities had the highest percentage of direct instruction around their transition into adult life. Students with learning disabilities, traumatic brain injuries, and emotional disabilities had the highest percentage of a course of study directly pertaining to transition planning. Finally, the percentages of disability categories for students who took a leadership role in transition planning were those with visual impairments, hearing impairments, and orthopedic impairments (Table 4). One can speculate as to why one category may have more involved in transition planning compared to another however the outcome data is not aligning with the more involved students in transition planning according to these particular national data (NLTS2, 2013).

According to Indicators 13 (transition) and 14 (postsecondary outcomes), transition planning does not appear to directly relate to postsecondary outcomes for the state of New Hampshire in 2011-2012 (Table 6 & Figure 5). The outcomes in New Hampshire at one point in time indicate that 47% of students with disabilities were enrolled in higher education or training programs and 22.5% of students with disabilities were competitively employed (NH DOE,
2013). Comparative discussion synthesizing national and state levels will be included in the subsequent discussion chapter.

Finally, qualitative interviews found some commonality and some contrasting discussion across educator, student, and parent interviews. Educators were predominantly focused on the prevalence of transition planning in high schools, career and college exploration and preparation, community experiences, regular education as a way to prepare for postsecondary life, and the connection to adult agencies. When asked about their high school experiences and how it might have impacted their postsecondary lives, young adults discussed career exploration and preparation activities and the course of study. They mentioned the building of confidence as important to finding employment. Parents in particular attributed community exploration, advocating for adult services, and social opportunities as crucial to positive outcomes for their adult children.
Chapter 5

CONCLUSIONS

Introduction

The purpose of this study was to determine whether young adults with disabilities differ across disability categories with regards to the percentages gainfully employed or participating in training or education programs after exiting high school. Former students from New Hampshire were studied, and nationwide analyses were also conducted. The study further aimed to determine whether certain elements of transition planning could potentially contribute to positive outcomes for former students with disabilities.

Problem Statement

Researchers have been conducting secondary quantitative analyses of postsecondary outcomes (Baer et al., 2011) and qualitative analyses regarding student perceptions of transition planning features for years (Agran & Hughes, 2008). It is important to continue to study factors potentially associated with the low employment and college enrollment rates among youth with disabilities despite changes in legislation in past decades. When IDEA was reauthorized in 2004, an important improvement was that all students identified with disabilities must have a transition plan in place upon turning age sixteen to help generate sustaining post-secondary school outcomes, including employment and post-secondary education however researchers have consistently discussed the persisting inequalities with regards to outcomes (IDEA, 2004; Newman et al., 2011).

The improvement in legislation for transitioning students with disabilities was enacted in an effort to improve educational and occupational outcomes for individuals with disabilities (34
C.F.R. 300.520 [20 U.S.C. 1415(m)], however, the disparities persist (Houtenville et al., 2015). As previously noted, the most recent Job Report from the Bureau of Labor Statistics (2017) revealed that only 28.7% of adults with disabilities have obtained competitive employment in contrast to the employment rate of the overall population which is 72.8%. Postsecondary education rates are much lower for students with disabilities (19.8% of people with disabilities ages 18 to 64 have a two-year degree or higher) than students without identified disabilities (37.9% of people without disabilities in the same age range) despite the IDEA legislation of 2004 (Grigal et al., 2015; Houtenville et al., 2015).

Current research is generally limited to secondary analysis of longitudinal outcome data (Newman et al., 2011) or qualitative analysis of select transition features or schools (Karpur et al., 2014). In addition, it is difficult to identify which factors might be a solution to the disparity due to a limitation in the current research across disability category and methodology. Several studies that aggregate disabilities (Gaumer Erickson, Noonan, Brussow & Gilpin, 2014; Gerber et al., 2014; Sulewski, Zalewska, Butterworth, J. & University of Massachusetts Boston, 2012) all cite disaggregating by disability category as a missed opportunity as it pertains to research in transition. This dissertation was designed to address the gap in the research due to commonly aggregated disability categories among transition studies in an effort to provide results that could assist schools with transition programming as mandated by federal legislation.

**Methodology**

In order to investigate how disability category and features of transition planning might be impacting students, I employed a mixed methods study that involved three levels of analysis. The first two levels of this study consisted of a secondary analysis of NLTS2 data and a descriptive analysis of New Hampshire compliance data required by IDEA. The third level of
this study involved interviews with educators and former students from two high schools in New Hampshire regarding what transition practices they believe to have benefited their adult lives.

Summary of National Level Findings

Postsecondary Employment and Education Rates for Students with Disabilities

The results of the national quantitative analysis indicated that students with disabilities are being hired but not necessarily sustaining employment. These results are consistent with the postsecondary education enrollment numbers. In addition, the outcomes vary by disability; however, it is difficult to ascertain if young adults in every disability category are employed and enrolled at the same rate due to much lower incidence of certain categories (MD, ID).

Most students (95.8%) identified with disabilities by the NLTS2 reported having worked for pay since leaving high school (2009, Wave 5) and 59% of young adults reported currently being employed in a paid job outside the home. Students with multiple disabilities were the least often employed (70.5%) and students with learning disabilities were most often employed since leaving high school (98.4%) (NLTS2, 2009). The largest percent reporting that they were currently working outside the home in a paying job were students with learning disabilities (66.7%) and at all since high school (98.4%) (NLTS2, 2009).

Only 14.7% of students with disabilities reported currently attending postsecondary education at the time of the survey (NLTS2, 2009) however 58.4% reported attending postsecondary education at some point since leaving high school. Students with hearing impairments and visual impairments had the highest percentage of all twelve categories for currently attending postsecondary education or attending at some point after exiting high school and students with intellectual disabilities were the least likely to report they were currently or previously enrolled in postsecondary education programs.
**Transition Programming Features**

High school students with disabilities are involved in transition planning and have a course of study that prepare them for their postsecondary goals. The students with the most significant disabilities and their parents reported more frequently to be involved in transition planning than students with higher incidence disabilities such as specific learning disability.

Students in the categories of intellectual disability, autism, and multiple disabilities were the top three groups reporting having a transition plan and as receiving instruction specifically focused on transition planning according to the NLTS2 (2009). Students with learning disabilities were the least likely to report that they received instruction specifically pertaining to transition planning. Regarding the student’s role in transition planning, the students who took a leadership role in their transition planning process the most often were the students with visual and hearing impairments. In addition, the students who received the most direct instruction in the area of transition planning are the students with the most significant disabilities. These results reveal disability category may impact the extent to which a student receives features of transition planning (direct instruction, course of study, and student role).

**Summary of State Level Findings**

**Transition Requirements**

The results of the state level quantitative analysis revealed that all but two of the districts in New Hampshire are complying with indicator 13 requirements at a 100% rate. The two schools that did not comply in the first year of analysis received 100% compliance rating given a second chance by the NH Department of Education. Because all districts were ultimately in compliance with the Indicator 13 requirements regarding transition services, plans, and features, this
dissertation explored a potential relationship between transition planning and outcomes at the state level through the postsecondary outcomes acquired for Indicator 14 as summarized below.

**Employment and Education Outcomes**

As far as the Post School Survey is concerned, 82.8% of the 209 former students who responded to the survey in 2013 reported to be employed or enrolled in education of some kind (NH DOE website: http://education.nh.gov/instruction). The disability categories are partially stratified in the NH DOE Post School Outcomes Survey leaving the third research question in this study partially unanswered although percentages are available regarding post school outcomes for all of the students with disabilities.

**Summary of School Level Findings**

**Interviews with Educators: Transition Coordinators, Special Education Teachers, and Special Education Administrators**

Transition coordinators, special education teachers and directors discussed several aspects of transition planning features in high school as positively impacting their students’ lives after exiting including community experiences, regular education offerings, connecting families with adult service agencies, and career and college preparation and exploration activities. The transition coordinator from the larger, less funded school involves his students in many community exploration activities that prepare them for career, college, and independent living. He runs a community-involved transition program directly with students with significant disabilities. The transition coordinator from the smaller school works in the SAU office and does not work directly with students. Educators from the smaller school described in-school activities to satisfy Indicator 13 requirements while, in contrast, the educators from the larger school
described many community opportunities for students in addition to in-school transition planning.

**Interviews with Former Students and Parents**

The results of the interviews from two high schools in New Hampshire revealed that students (and their parents) attributed career exploration activities, internships and part-time jobs, social opportunities, and the connection to adult service agencies to productive lives after high school. All students had been employed at one time since leaving high school and none of them reported ever having been enrolled in college. Parents and students from the larger school attributed the career exploration activities in the community to positive employment outcomes. Students from the smaller school attested that in-school activities such as CTE and practicing interview skills as contributing to attaining part-time employment following high school.

**Discussion**

**The Impact of Disability Category on Postsecondary Outcomes**

The majority of the postsecondary employment and education outcome research studies do not disaggregate by all twelve IDEA disability categories: specific learning disability, speech/language impairment, intellectual disability (previously called mental retardation), emotional disability, hearing impairment, visual impairment, orthopedic impairment, other health impairment, autism, traumatic brain injury, multiple disabilities, and deaf-blindness (IDEA, 2004; Gaumer Erickson, et al., 2014; Gerber et al., 2014; Sulewski et al. & University of Massachusetts Boston, 2012). In addition, it is often stated in the discussion of peer-reviewed articles that disaggregating by category was a missed opportunity for their results (Gaumer Erickson, Noonan, Brussow & Gilpin, 2014; Gerber et al., 2014; Sulewski, Zalewska, Butterworth, J. & University of Massachusetts Boston, 2012). The findings of this study that was
disaggregated by all twelve disability categories revealed that youth with the most significant disabilities are enrolled in postsecondary education and employed less often than youth with other less involved disabilities.

It was notable that after generating data tables from the national longitudinal data that revealed results consistent with prior research, the state level results revealed similar results with regards to lower college enrollment and employment outcomes for youth with disabilities. New Hampshire has slightly higher positive outcomes; however, still lower than the population without disabilities. All districts in New Hampshire were fully compliant with regards to transition planning in high school; however, the postsecondary consensus survey did not show overwhelmingly positive outcomes across the categories provided by the state survey results.

Although it makes sense that the percentages of youth previously enrolled in postsecondary education are higher than currently enrolled due to the short-term nature of college programs, the percentages of the previously employed are also higher than currently employed. This confirms the understanding that people with disabilities are challenged with regards to finding sustained and meaningful employment. It is safe to assume that due to the lack of appropriate college and training programs for people with disabilities, they lack the thorough training for careers that might last for longer periods of time that could be attained in college programs.

While it is encouraging to find that there are students in every disability category that reported having been employed at some point since high school, the employment and education rates vary by disability in that students with the most involved disabilities are employed less often and for shorter periods of time. This was true across the three levels of analysis in this dissertation: national, state, and school. Compared to youth in other disability categories,
students with learning disabilities are employed and enrolled most often in New Hampshire and around the country. Student interviews revealed that all respondents had been employed at one time; however, only three out of six interviewees were currently employed. The other three had been employed at fast-food establishments and were in the process of seeking employment. None of the interviewees had been or were currently enrolled in college or career training programs. This result points to the lack of college and training programs in the area that are suitable for young adults with disabilities.

The disparities persist when comparing employment rates of neurotypical young adults and those with disabilities possibly due to the lack of postsecondary education programs for youth with disabilities in the community. As outlined in previous chapters, high schools are required to comply with detailed transition plans in IEPs that include an employment and postsecondary education or training goal every year. The requirements exit regardless of the disability and what programs might be lacking in the community. The students in the most significant disability categories have the lowest enrollment in community training programs and are the least likely to be employed. A lack of postsecondary education and training programs could be contributing to the lower rates of currently employed young adults with disabilities and threatening the integrity of the transition plans schools are required to follow. Still, the question remains as to which stakeholder is responsible for providing postsecondary education options if any.

**The Impact of Transition Planning and Disability Category**

Research in the field of services, programs, and outcomes of students with disabilities transitioning out of high school has involved studies ranging from gathering outcome data on a national longitudinal basis (Newman et al., 2011) to an interview with one student at a time
(Agran & Hughes, 2008). Researchers express interest in learning the current trends of postsecondary employment, education, and independent living (Hagner et al., 2012). These outcomes are pivotal in understanding what impact special education policy at the local, state, and federal levels has had on the transition process. Other research has aimed to understand what role a student’s own self-determination plays in making decisions and crafting goals for his/her future (Agran & Hughes, 2008; Shogren et al., 2012; Thoma et al., 2008; Kohler, 1996; Kohler et al., 2016). Further studies have investigated the efficacy of new programs launched in particular schools and gathered the perceptions of teachers, administrators, and transition coordinators to contribute the professional’s point of view to the body of research in transition studies (Brooke et al., 2009; Thoma et al., 2008). Given a review of the literature, this dissertation disaggregated by disability to understand the impact of transition planning (course of study, direct instruction, and student role) on every disability category.

When students in regular education are involved in a course of study and direct instruction, they are more often employed (Bouck & Joshi, 2015). This study revealed that students with significant disabilities received most direct instruction however were not the most frequently in a course of study to achieve the goal. This suggests that schools are not equipped with the programming necessary for students with disabilities to receive instruction toward their postsecondary goals or they are simply not included in opportunities that are offered to other students. In addition, special educators are solely directing the transition planning even when students are not benefiting from direct instruction in regular education. Exposure to direct instruction has the potential to positively impact the transition planning process. This finding suggests that high schools may not necessarily be prepared to train students with significant
disabilities to gain successful employment after high school and these students are often excluded from the course of study that exists for students without disabilities.

In addition to course of study and direct instruction, the role the student plays in the transition planning process is pivotal for developing self-determination skills and may impact postsecondary employment and education outcomes (Agran & Hughes, 2008). The students with visual and hearing impairments were most often the students who took a leadership role in their transition planning and most often enrolled in college. In addition, the students with the most significant disabilities received the most direct instruction in the area of transition planning but were the least likely to be enrolled or employed. It could be that students with emotional disturbances would have higher employment and education enrollments after high school if they were more involved in a course of study and direct instruction with regards to transition planning. Students with ED were comparatively low with regards to taking the leadership role in transition planning as well as for outcomes. These results reveal that transition planning features (direct instruction, course of study, and student role) may be impacting the outcomes for particular groups of students with disabilities.

The New Hampshire results did not reveal a connection between transition planning compliance and postsecondary outcomes due to the overwhelmingly successful Indicator 13 scores earned by schools in New Hampshire. As explained in previous chapters, the questions within the Indicator 13 compliance checklist include course of study, direct instruction, and student role however the data is only available by compliance percentages and not available by question. It is impossible to identify the interplay between the transition planning in New Hampshire schools assessed by Indicator 13 with the postsecondary survey data attained for the Indicator 14 requirements given the data available. However, the students from two New
Hampshire schools interviewed for this dissertation stated that transition planning had an important impact on their lives after high school. They participated in career exploration activities, opportunities to practice what they learned in the community and participation in CTE programming. All of the students had been employed at least one time since leaving high school.

Educators explained that their special education departments provide a myriad of transition services for students with disabilities to develop career and college readiness including career and college exploration and training within regular education and in the community. Although the high schools may not be including students with disabilities as much as they could be, special educators are bridging the gap to prepare their students for the adult life. These findings validate the theory that students benefit from the individual transition planning that occurs in high schools.

Limitations

The final year of the NLTS2 (2009) was during a significant recession in the United States. Unfortunately, this end point is earlier than the first NH data available. This gap in time prevented a secondary analysis at a later time; this would have been beneficial assuming outcomes improved as more time lapsed after IDEA was reauthorized in 2004. Although the national data is available by every disability category, the timing may be impacting the results with regards to outcomes due to the status of the economy during the end of NLTS2 in 2009. The employment rate and enrollment rates across the population of the United States dipped during this recession according to the Bureau of Labor Statistics (2017). More youth with disabilities may have been employed and enrolled in college programs were it not for the tumultuous state of the nation at the time of the surveys conducted for NLTS2. NLTS2’s strength, however, is that it involved 11,000 youth who completed surveys regarding their transition planning in high school,
the planning varies greatly across individuals, states, and schools. In the state of New Hampshire, all districts were found compliant for Indicator 13 which does not lend itself to a comparative analysis that involves the Indicator 14 survey results.

Limitations of the state level information from New Hampshire included grouping of the disability categories on the Annual Performance Reports and State Performance Plan documents (NH DOE website: www.education.nh.gov/instruction). The Indicator 14 data pertaining to outcomes, only provides data for ID, ED, LD, and a final category that groups all other disabilities (All Other: AO) which does not allow an analysis by all twelve categories as recommended by researchers (Gerber et al., 2014). If data were available by all categories at the state level, comparison between national and state could contribute to the conversation about what programming is producing the most frequent successful outcomes for particular groups of students. For example, if New Hampshire were employing higher numbers of people with visual impairments as compared with the United States, a closer look at that transition planning practice might be implemented in other states to improve outcomes. The fact remains that even with categorical data across states, transition programming varies greatly across states, schools, and students as required by the IEP.

Another limitation to this study was the small sampling of interviews which were not conducted with all disability categories. This study did not pursue testimony from every disability category limiting the qualitative results contributing to the discussion. In addition, this dissertation involved only two schools from which to recruit three educators and three former students each to interview. This may have limited the data because interview information was limited to this small sample of schools and interviewees. Furthermore, the qualitative data is subject to self-selection bias as well as the bias on the part of the educators who are invested in
the programs they describe. In addition, the protocols utilized for this dissertation were developed to identify what factors in high school might have contributed to current outcomes for youth however they were not specifically designed to align with Indicator 13 questions so as not to lead the interviewees.

**Implications**

The fact that all of the interviewees cited the transition programming in high school as essential for positive employment outcomes after high school suggests that the focus must remain on strengthening high school programs for students with disabilities. Although the national data was inconsistent with regards to the correlation between students receiving services leading to positive outcomes when the students had significant disabilities, the qualitative results were clear. The state level data leaves the question regarding transition planning unanswered due to the limited data available however, the state policies and regulations remain in what is required of educators to provide to nurture college and career readiness.

The interplay between policy and practice as it pertains to transition is not always logical due to the limited postsecondary opportunities available for students with disabilities. In other words, New Hampshire, for example, requires schools to authentically assess students to identify career goals, include a postsecondary college and career goal in the IEP, provide a course of study to align with the goals, directly instruct the students about transition, and encourage a strong student role in the process however the compliance data is not aligned with the post school consensus data. This seems to be a lost opportunity from which to vet the effectiveness of transition programs that could be determined by how successful students would be in college and training programs in adult life.

**Recommendations**
Looking ahead, recommendations include comparing and contrasting what students across disability category have received for college and career readiness in schools and the actual number of successful outcomes (such as employment and college/training programs). To fully understand what is needed for all students with disabilities, it is strongly recommended to disaggregate by disability category when identifying variables for a study. Furthermore, using a mixed-methodology that looks at similar points in time at quantitative and qualitative findings will triangulate the results thereby providing an opportunity for a cross-section analysis. Due to variability in transition programming, finding interviewees in every disability category within one state followed by an analysis of that state’s compliance data according to the full Indicator 13 checklist along with the national findings is pivotal to provide information that is missing from the current pool of research in this area.

Transition planning in high schools may be impacted by the recent Supreme Court ruling Endrew F. v. Douglas County School District on March 22, 2017 wherein “FAPE” (Free, Appropriate, Public Education that is the standard to which all students who receive special education must be afforded) has been changed. IDEA now requires that an educational program must be “appropriately ambitious in light of the child’s circumstances (Endrew F. v. Douglas County Sch. Dist., 2017). This is a very recent example of how the field is always evolving and another reason that the recommendation for future research include authentic transition assessments, goals, and direct instruction that will be satisfy the requirement to be “appropriately ambitious” given the child’s “circumstances” (Endrew F. v. Douglas County Sch. Dist., 2017).

Additional recommendations include pursuing state-level data from the NLTS2 to provide an opportunity for state by state comparisons for all disability categories. The implications for analyzing data across states and all disability categories could provide an
opportunity for understanding which subgroups are having the most success with regards to postsecondary outcomes and what transition planning is working for which populations. After pursuing what is working in a given state, a true experiment could follow up the gathering data phase to assess the efficacy of the implementation of that program.

There are opportunities for further research which Gerber (2014) recommends including requiring states to capture data on the eight items that the national transition survey offers rather than allow maximum flexibility (p. 103). There would be a dataset that could be compared from state to state on a national basis if these items were used consistently by each state. In addition, the data is collected by disability only and not by disability category which could provide more opportunities for research across the different educational disability identifications such as specific learning disability and intellectual disability. Finally, other outcomes could be analyzed in addition to only employment and postsecondary education (Gerber, 2014, p. 103). There may be new opportunities for high school graduates to develop career skills such as vocational training programs, community service, and volunteer work which could provide an untapped source of data for analysis of postsecondary outcomes. Given the ever-changing work force that might be due to the integration of technology, addressing types of work people with disabilities are attaining could be beneficial to ascertain. It appears that technology is taking the replacing employees in fields such as travel, journalism, and some aspects of manufacturing (BLS, 2017). People with disabilities may be attaining jobs however the quality of the job is also important to investigate because high schools strive to align outcomes with authentic transition goals.

**Summary**

The purpose of this study was to investigate the postsecondary employment and education enrollment of students with disabilities as impacted by disability category and features
of transition planning. I found that successful outcomes are generally lower when the significance of the disability is higher despite the finding that students with more significant disabilities often receive more frequent transition services. The relationship between disability and transition involves various factors at the national, state, and local levels. Future research should involve commonality of terms in transition across states and a detailed look into what is impacting students in all categories. I believe I contributed to the conversation regarding what might be benefitting students with disabilities such as providing a well-developed transition plan and involving them in the transition planning process to promote successful postsecondary outcomes.
LIST OF REFERENCES


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Disability, Autism, or Other Disabilities: Data from the National Longitudinal Transition Study-2. *Intellectual And Developmental Disabilities, 50*(1), 16-30.


APPENDICES
New Hampshire Special Education Category Definitions

(1) (i) **Autism** means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three that adversely affects a child’s educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences.

(ii) Autism does not apply if a child’s educational performance is adversely affected primarily because the child has an emotional disturbance, as defined in paragraph (c)(4) of this section.

(iii) A child who manifests the characteristics of autism after age three could be identified as having autism if the criteria in paragraph (c)(1)(i) of this section are satisfied.

(2) **Deaf-blindness** means concomitant hearing and visual impairments, the combination of which causes such severe communication and other developmental and educational needs that they cannot be accommodated in special education programs solely for children with deafness or children with blindness.

(3) **Deafness** means a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification that adversely affects a child’s educational performance.

(4) (i) **Emotional disturbance** means a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child’s educational performance:

   (A) An inability to learn that cannot be explained by intellectual, sensory, or health factors.
   (B) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers.
   (C) Inappropriate types of behavior or feelings under normal circumstances.
   (D) A general pervasive mood of unhappiness or depression.
   (E) A tendency to develop physical symptoms or fears associated with personal or school problems.

(ii) Emotional disturbance includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance under paragraph (c)(4)(i) of this section.

(5) **Hearing impairment** means an impairment in hearing, whether permanent or fluctuating, that adversely affects a child’s educational performance but that is not included under the definition of deafness in this section.

(6) **Intellectual disability** means significantly sub average general intellectual functioning, existing concurrently with deficits in adaptive behavior and manifested during the developmental period that adversely affects a child’s educational performance.

(7) **Multiple disabilities** means concomitant impairments (such as intellectual disability -blindness or intellectual disability -orthopedic impairment), the combination of which causes such severe educational
needs that they cannot be accommodated in special education programs solely for one of the impairments. Multiple disabilities does not include deaf-blindness.

(8) **Orthopedic impairment** means a severe orthopedic impairment that adversely affects a child’s educational performance. The term includes impairments caused by a congenital anomaly, impairments caused by disease (e.g., poliomyelitis, bone tuberculosis), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns that cause contractures).

(9) **Other health impairment** means having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment, that- (i) Is due to chronic or acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome; and (ii) Adversely affects a child’s educational performance.

(10) **Specific learning disability.** (i) General. Specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. (ii) Disorders not included. Specific learning disability does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of intellectual disability, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

(11) **Speech or language impairment** means a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment, that adversely affects a child’s educational performance.

(12) **Traumatic brain injury** means an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child’s educational performance. Traumatic brain injury applies to open or closed head injuries resulting in impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. Traumatic brain injury does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma.

(13) **Visual impairment** including blindness means an impairment in vision that, even with correction, adversely affects a child’s educational performance. The term includes both partial sight and blindness.

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NLTS-2 Disability Categories as compared with NH DOE Disability Categories

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NEW HAMPSHIRE RULES FOR THE EDUCATION OF CHILDREN WITH DISABILITIES
   As amended May 14, 2014, Retrieved from

   http://www.nlts2.org/studymeth/nlts2_design_timeline.pdf
Quantitative Measures

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| Transition Planning | Student School Program Survey  
Wave 1 (2001)                                                                 | NH State & District Profiles |
| 1. Youth with transition plan received instruction specifically focused on transition planning
2. Transition plan specifies course of study to achieve goal for youth with transition plan
3. The role of the youth in transition planning | Indicator 13 Compliance Percentages |
| **Outcomes**  |                                                                                 |               |
| Postsecondary Education | Parent/Young Adult Survey  
| 1. Enrollment (currently attending a postsecondary institution)                                                                 | Indicator 14 Respondents:  
Percent of youth who are no longer in school, had IEPs in effect and were: |
| 2. Enrollment (has attended any institution since leaving high school)                                                                 | A. Enrolled in higher education within one year of leaving high school. |
| Employment    | 1. Employed (young adult currently has a paid job)                              |                |
|               | 2. Employed (out-of-school young adult has worked for pay since leaving high school) | B. Enrolled in higher education or competitively employed within one year of leaving high school. |
|               |                                                                                | C. Enrolled in higher education or in some other postsecondary education or training program; or competitively employed or in some other employment within one year of leaving high school. |
Interview Protocol for Former Students

Instructions:

1. Present the interviewee with the consent form describing the study and their rights as a participant. Provide them time to review the document, confirm that they understand their rights and specifically ask their permission to record the interview. Finally, collect their signature on the consent form.

2. Prior to starting the recording, remind the participant to answer the questions with as much details as possible and not to omit any information they believe is already known to the researcher.

3. Begin each recording by stating the name of the interview participant and documenting the date and time of the interview.

4. Read each question, one at a time and allow the participant ample time to respond. Follow-up with prompts such as “tell me more about” or “can you explain further what you meant by” to ensure that the richest detail has been captured. Allow for all responses, even if the participant goes away from the topic of the initial question.

5. After all questions have been answered, review and repeat any questions that you feel were insufficiently answered.

6. At the close of the interview, offer an opportunity for the participant to expand on anything else related to the interview topic that may not have been asked. Lastly, thank the participant for their responses.

Questions: Introductions: Please tell me about yourself including your disability category.

6. Describe your experience transitioning out of high school.

7. Is there a specific aspect of high school or event that influenced your career or college plans?

b. Please explain any transition activities:

8. Describe in your own words the impact transition planning in high school had in preparing you for the transition to a career or college.

9. Did transition planning activities help foster your interest in taking additional course work to provide the professional skills needed for your future career? Please explain.

10. What are other things high schools could do to better prepare students for their future?
Interview Protocol for Staff

Instructions:

1. Present the interviewee with the consent form describing the study and their rights as a participant. Provide them time to review the document, confirm that they understand their rights and specifically ask their permission to record the interview. Finally, collect their signature on the consent form.

2. Prior to starting the recording, remind the participant to answer the questions with as much details as possible and not to omit any information they believe is already known to the researcher.

3. Begin each recording by stating the name of the interview participant and documenting the date and time of the interview.

4. Read each question, one at a time and allow the participant ample time to respond. Follow-up with prompts such as “tell me more about” or “can you explain further what you meant by” to ensure that the richest detail has been captured. Allow for all responses, even if the participant goes away from the topic of the initial question.

5. After all questions have been answered, review and repeat any questions that you feel were insufficiently answered.

6. At the close of the interview, offer an opportunity for the participant to expand on anything else related to the interview topic that may not have been asked. Lastly, thank the participant for their responses.

Questions:

5. Describe your efforts toward influencing youth to achieve their goals after high school.

6. Describe your experience in developing and delivering programs or practices that influence college and career readiness.

7. Are there specific practices that directly target the transition to a career or to college?

8. What contextual factors describe your program?
   a. Setting, community type, delivery mode
   b. Participation level/dosage
   c. Structural supports such as partnerships, funding, established longevity
### High School Enrollments in New Hampshire Public Schools

**As of October 1, 2014**

<table>
<thead>
<tr>
<th>0-200 Pupils (26)</th>
<th>501-1,000 Pupils (26)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colebrook</td>
<td>Bow</td>
</tr>
<tr>
<td>Gorham Randolph Shebubble Cooperative</td>
<td>Claremont</td>
</tr>
<tr>
<td>Hinsdale</td>
<td>Contoocook Valley</td>
</tr>
<tr>
<td>Lincoln-Woodstock Cooperative</td>
<td>Conway</td>
</tr>
<tr>
<td>Lisbon Regional School (High)</td>
<td>Dresden</td>
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<tr>
<td>Milton</td>
<td>Fall Mountain Regional</td>
</tr>
<tr>
<td>Moultonborough</td>
<td>Gilford</td>
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<tr>
<td>Northumberland</td>
<td>Governor Wentworth Regional</td>
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<tr>
<td>Pittsburg</td>
<td>Hollis-Brookline Cooperative</td>
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<td>Pittsfield</td>
<td>John Stark Regional</td>
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<td>Profie</td>
<td>Kearsarge Regional</td>
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<tr>
<td>Bud Carlson Academy - Rochester</td>
<td>Laconia</td>
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<td>Gunstock</td>
<td>Lebanon</td>
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<tr>
<td>Wilton-Lyndeborough Cooperative</td>
<td>Merrimack Valley</td>
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<tr>
<td>* Academy for Science and Design</td>
<td>Milford</td>
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<td>* Cocheco Arts and Technology</td>
<td>Monadnock Regional</td>
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<tr>
<td>* CSI Charter School</td>
<td>Oyster River Coop</td>
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<tr>
<td>* Granite State Arts Academy</td>
<td>Pelham</td>
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<tr>
<td>* Great Bay eLearning Charter School</td>
<td>Pembroke</td>
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<td>* Ledyard Charter School</td>
<td>Pem-Baker Regional</td>
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<td>* Making Community Connections</td>
<td>Pembroke</td>
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<td>* Next Charter School</td>
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<tr>
<td>* North Country Charter Academy</td>
<td>Southco-operative</td>
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<td>* PACE Career Academy Charter School</td>
<td>Windham</td>
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<tr>
<td>** TEAM Charter School</td>
<td>*** Coe-Brown Northwood Academy</td>
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<td>Virtual Learning Academy Charter School</td>
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<td>2,746</td>
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<td>Total</td>
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### 201-300 Pupils (6)

<table>
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<th>1,001 and up Pupils (20)</th>
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<tbody>
<tr>
<td>Epping</td>
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<tr>
<td>Havenhill Cooperative</td>
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<tr>
<td>Hopkinton</td>
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<tr>
<td>Littleton</td>
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<tr>
<td>Manchester School of Technology (High School)</td>
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<td>Newmarket</td>
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<tr>
<td>301-900 Pupils (15)</td>
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</tbody>
</table>

**Equal Opportunity Employer - Equal Educational Opportunities**

- Denotes Charter School
- Denotes Joint Maintenance Agreement
- Denotes Public Academy
11-May-2016

Arakelian, Caroline
Education, Morrill Hall
26 Lillians Lane
Dover, NH 03820

**IRB #:** 6444

**Study:** Understanding the Impact of Transition Planning toward Postsecondary Outcomes for Young Adults with Disabilities across School, State, and National Levels

**Approval Date:** 12-Apr-2016

The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved the protocol for your study.

**Approval is granted to conduct your study as described in your protocol for one year from the approval date above.** At the end of the approval period you will be asked to submit a report with regard to the involvement of human subjects in this study. If your study is still active, you may request an extension of IRB approval.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the document, *Responsibilities of Directors of Research Studies Involving Human Subjects*. This document is available at [http://unh.edu/research/irb-application-resources](http://unh.edu/research/irb-application-resources). Please read this document carefully before commencing your work involving human subjects.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or [Julie.simpson@unh.edu](mailto:Julie.simpson@unh.edu). Please refer to the IRB # above in all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,

[Signature]

Julie F. Simpson
Director

cc: File
Graham, Suzanne