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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

THE EXPANDED CORE CURRICULUM AND ITS
RELATIONSHIP TO POSTSCHOOL
OUTCOMES FOR YOUTH WHO
ARE VISUALLY IMPAIRED

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Education

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College of Education and Behavioral Sciences
School of Special Education
August, 2009

This Dissertation by: Martin R. Monson

Entitled: *The Expanded Core Curriculum and Its Relationship to Postschool Outcomes For Youth Who Are Visually Impaired*

has been approved as meeting the requirement for the Degree of Doctor of Education in College of Education and Behavioral Sciences in School of Special Education

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ABSTRACT

Monson, Martin R. *The Expanded Core Curriculum and Its Relationship To Postschool Outcomes For Youth Who Are Visually Impaired*. Published Doctor of Education dissertation, University of Northern Colorado, August, 2009.

The purpose of this study was to examine the relationship between instruction in the Expanded Core Curriculum (ECC) for students who are visually impaired and postschool quality of life (QOL) outcomes. The study was an analysis of an existing dataset collected as part of the National Longitudinal Transition Study 2 (NLTS2). Information from wave 1 of the respective teacher, program, and parent surveys was used to gather information related to the ECC areas, and information for the wave 3 parent or youth survey, the most recently available dataset, for only out of school youth was used to gather information related to QOL outcomes.

MANOVAs were used to determine if QOL differences in groups, based on those who did and those who did not receive ECC instruction, existed. Each significant MANOVA was followed by a descriptive discriminant analysis to determine which variable or variables were responsible for the significant MANOVA. An all subsets multiple regression was conducted to investigate which combination of ECC areas could best explain or predict postschool outcomes. Finally, a hierarchical regression was completed to determine what role the age of initiation of specialized services played in explaining postschool outcomes.

An examination of the results of the MANOVAs found that differences in QOL outcomes existed between the groups of participants. A post-hoc examination of the means of the variables identified by the discriminant analysis to be responsible for the significant MANOVAs revealed that instruction in the ECC areas was associated with lower postschool outcomes. Additional analysis revealed that time spent in the general education classroom may be a confounding variable affecting the results.

The results of the multiple regression revealed that a large amount of the variance of postschool outcomes could be explained by the regression models developed. However, it was suggested, based on the results of the lower outcomes means from research question one, the models were explaining diminished outcomes. This was corroborated by the presence of predictors with negative beta values in every model developed. The ECC areas of Independent Living Skills and Self-Determination were identified as important areas of instruction as they had large positive beta values in their respective models across the three outcome domains. Age when specialized services were initiated was not found to explain any additional variance in the outcome domains.

The variables used in the regression analysis related to Independent Living and Self-Determination were found to be positive, significant, and relatively strong predictors of postschool outcomes for all three postschool outcome domains. Yet, only 23.4% and 42.4% respectively of participants had this as a primary goal on their Individualized Education Plans. Given the importance of instruction in these two areas for the participants of this study, more time spent learning the skills associated with these two areas by students who are visually impaired is warranted.

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CHAPTER I

INTRODUCTION

Several studies have examined the employment rate of adults who are blind (for example see Houtenville, 2003; Kirchner & Schmeidler, 1997; Trupin, Sebasta, Yelin, & LaPlante, 1997). The authors of these studies determined the employment rate of individuals who are blind ranged from approximately 25% to 30%. In a later study, Houtenville (2006) reported the employment rate of the general population to be approximately 80%. Additionally, the gap in employment rate percentages seems to start early in an individual's work lifetime. Wagner, Newman, Cameto, Garza, and Levine (2005) found while 55% of all high school graduates were employed by the following fall, only 28% of students who were visually impaired were similarly employed. The apparent early discrepancy in the employment rates between individuals who are blind and the general population warrants further investigation.

However, examining the employment rates of a group of individuals may result in a partial examination of those individuals' lives. As integration into American society is the goal of education (DeStefano & Snauwaert, 1989), Halpern (1993) explained employment is only one part of successful integration. He stated that quality of life indicators should measure the degree to which transition from school to adult life was successful. Halpern identified three domains with 15 different outcome measures found throughout the literature in studies related to transition outcomes (refer to Figure 1 for

the complete listing). Halpern went on to suggest that comprehensive quality of life (QOL) measures were appropriate to use as an evaluative tool to measure student outcomes.

It is the view of many who educate children who are visually impaired that instruction in a disability-specific curriculum called the Expanded Core Curriculum (ECC) (see Hatlen, 1996) is necessary to achieve a satisfactory postschool quality of life. While there has been much written about the ECC (see Erin, 2006; Hatlen, 1996, 2003, for a brief review), there is little research investigating the extent to which instruction in the ECC leads to an improved postschool quality of life (Sweet-Barnard, Freeland, Johnson, & Monson, 2007).

Comparing Hatlen's ECC areas and Halpern's QOL domains in Figure 1, one can see how instruction in Hatlen's ECC skill areas can lead to enhanced outcomes on Halpern's QOL measures. For example, instruction in the ECC area of orientation and mobility could almost certainly lead to a greater level of performance in almost all of the measures of the Performance of Adult Roles domain. Orientation and mobility skills would seem necessary in order to get to a job, move around the workplace, access various parts of one's larger community, travel to see friends, or attend classes at a local community college or university. In addition, assistive technology skills would almost certainly be needed to perform some job tasks, access information related to community events, and enroll in or take postsecondary classes. The skills contained within these two ECC areas highlight some possible relationships of the ECC to postschool quality of life. Many others also exist. Figure 1 contains a complete list of Hatlen's ECC areas, and Halpern's QOL measures.

Hatlen's ECC Skill Areas	Halpern's Quality of Life Outcome Measures
1. Social Interaction	Physical and Material Well Being
2. Assistive Technology	1. Physical and mental health
3. Career Education	2. Food, clothing and lodging
4. Orientation and Mobility	3. Financial Security
5. Recreation and Leisure	4. Safety from harm
6. Independent Living	Performance of Adult Roles
7. Self-Determination	1. Mobility and community access
8. Academic Compensatory	2. Vocation, career and employment
9. Sensory Efficiency	3. Leisure and recreation
	4. Personal relationships and social networks
	5. Educational attainment
	6. Spiritual fulfillment
	7. Citizenship
	8. Social responsibility
	Personal Fulfillment
	1. Happiness
	2. Satisfaction
	3. Sense of general well-being

Figure 1. Hatlen's (1996) Expanded Core Curriculum Skill Areas and Halpern's (1993) Quality of Life Outcome Measures.

Purpose

The purpose of this study was to determine the relationship between instruction in the Expanded Core Curriculum as identified by Hatlen (1996, 2003) and selected postschool quality of life outcomes identified by Halpern (1993) for secondary students who were visually impaired.

To answer the research questions listed below, a longitudinal study was necessary, one that was capable of gathering information related to students with visual impairments' instruction in the ECC areas while those students were in high school and postschool QOL outcomes. Such a study is currently in progress. The National Longitudinal Transition Study 2 (NLTS2), funded by the United States Department of Education, began in 2001. The NLTS2 is gathering information on a nationally representative sample of approximately 11,000 students with disabilities (*Facts From NLTS2*, n.d.). Approximately 1,250 of those students were visually impaired (*Facts From NLTS2*, n.d.). Data were gathered from school districts, teachers, students, and parents on topics related to both the ECC areas and various QOL measures. Given the large sample size, the longitudinal nature of the NLTS2 study, and the alignment of data collection to the ECC areas and QOL domains, the data gathered by the NLTS2 made it possible to address the following research questions.

Research Questions

- Q1 Is there a difference in quality of life outcomes for students who are visually impaired and who received instruction in the Expanded Core Curriculum areas versus quality of life outcomes for students who are visually impaired and who did not receive instruction in the Expanded Core Curriculum areas?
- Q2 Which Expanded Core Curriculum area or combination of areas best predicts postschool quality of life?

- Q3 After controlling for instruction in the Expanded Core Curriculum, is the relationship between postschool quality of life and age when a participant started to receive services for his or her vision impairment statistically significant?

Rationale

Will (1983), then Assistant Secretary of Education, stated transition was “an outcome-oriented process” (p. 2), and depicted the process as a bridge between school and adult life first requiring a “secure foundation . . . of preparation in secondary school” (p. 2). As transition as an educational construct began to emerge in the 1980s, Will postulated a successful transition would lead to the ultimate goal of the American education system, employment. Employment brings with it opportunities to fulfill some of the areas of Halpern’s (1993) QOL indicators such as social contacts and contributing to society. Further, due to the income generated from employment, the probability of attaining many of Halpern’s measures would increase (Will, 1983).

In the early 1970s, current leaders in the field of educating children with visual impairments hypothesized such students needed instruction in a disability-specific curriculum in order to have a comparable postschool quality of life as their sighted peers (Alonso, 1986; Bina, 1999; Curry & Hatlen, 1988; Hatlen, 1993, 1996; Morrison, 1974). In keeping with Will’s (1983) analogy, the ECC was a component of the foundation necessary for a successful transition of a student who was visually impaired. Although much has been written about the ECC and its component parts since the formalized education of students who are blind began in the United States (Erin, 2006; Hatlen, 1996), there seemed to be a dearth of studies connecting instruction in the ECC to an increased QOL. This was evidenced by an unpublished meta-analysis on the topic of

transition and students who were visually impaired by Sweet-Barnard et al. (2007), in which the authors found only two studies which met the definition of scientific research as defined by the No Child Left Behind Act of 2001 (NCLB).

Delimitation

The participants in the NLTS2 study were identified as visually impaired using the Individuals with Disabilities Education Act definition ("*Facts From NLTS2*," n.d.). Kirchner and Diament (1999) and Kirchner and Smith (2005) hypothesized the federal government severely undercounts the number of children who are visually impaired, and the data gathered by the NLTS2 study on students who were visually impaired may differ from those of students who were visually impaired but included in another disability category.

Terms and Acronyms

ECC. Expanded Core Curriculum-

A disability specific curriculum for students who are visually impaired. It is comprised of instruction in the following skill areas: Orientation and Mobility, Assistive Technology, Career Education, Leisure and Recreation, Sensory Efficiency, Academic Compensatory, Independent Living, Social Interaction, and Self-Determination (Hatlen, 1996, 2003).

IDEA. Individuals with Disabilities Education Act, as amended (2004)

IEP. Individualized Education Program

LEA. Local Education Agency

NLTS2. National Longitudinal Transition Study 2

NCLB. No Child Left Behind Act of 2001 (2002)

Scientifically Based Research as defined in the No Child Left Behind Act of 2001 (2002).

The term "scientifically based research"—

(A) means research that involves the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge relevant to education activities and programs; and

(B) includes research that—

(i) employs systematic, empirical methods that draw on observation or experiment;

(ii) involves rigorous data analyses that are adequate to test the stated hypotheses and justify the general conclusions drawn;

(iii) relies on measurements or observational methods that provide reliable and valid data across evaluators and observers, across multiple measurements and observations, and across studies by the same or different investigators;

(iv) is evaluated using experimental or quasiexperimental designs in which individuals, entities, programs, or activities are assigned to different conditions and with appropriate controls to evaluate the effects of the condition of interest, with a preference for random-assignment experiments, or other designs to the extent that those designs contain within-condition or across-condition controls;

(v) ensures that experimental studies are presented in sufficient detail and clarity to allow for replication or, at a minimum, offer the opportunity to build systematically on their findings; and

(vi) has been accepted by a peer-reviewed journal or approved by a panel of independent experts through a comparably rigorous, objective, and scientific review. ("NCLB," 2002 pp. 1964-1965)

QOL. Quality of Life—

Outcomes for students in special education that can be used to structure and evaluate transition which include:

(a) physical and mental health, (b) food, clothing and lodging, (c) financial security, (d) safety from harm, (e) mobility and community access, (f) vocation, career and employment, (g) leisure and recreation, (h) personal relationships and social networks, (i) educational attainment, (j) spiritual fulfillment, (k) citizenship, (l) social responsibility, (m) happiness, (n) satisfaction, (o) sense of general well-being (Halpern, 1993, p. 491).

Summary

This chapter introduced the Expanded Core Curriculum, a disability specific curriculum for students who are visually impaired. A model for examining quality of life outcomes was shared. The purpose of the study, to examine the relationship between the Expanded Core Curriculum and postschool quality of life outcomes, was identified. As information related to both the ECC and QOL outcomes has been gathered as part of the NLTS2, the NLTS2 was identified as the data source to answer the research questions.

CHAPTER II

REVIEW OF LITERATURE

This chapter begins with a discussion of theories or philosophies that underlie the construct of transition. It continues with a review of the legislative history of transition for all students who are disabled. The next section discusses some expanded aspects of transition specifically for students who were visually impaired.

As the purpose of this study was to examine the specialized factors that lead to a successful transition for students who were visually impaired, a construct was identified to help narrow the search for what specialized educational skills were necessary for students with visual impairments to have a successful transition from secondary to postsecondary life. Each of the skills contained within the construct is then discussed.

Time spent in the public school system comprises the first half of the picture of transition; outcomes for youth and young adults who were disabled as they became or attempted to become integrated into society constitutes the second half. Therefore, a model for examining societal integration is shared. Recent research for individuals who were visually impaired is discussed as it relates to components of the model.

The chapter concludes with a description of the National Longitudinal Transition Study 2 (NLTS2), a study being conducted at the national level, which has students with disabilities as participants. Thousands of students, their parents, and their school personnel have all provided information about students' secondary school experiences.

Additionally, those same students or their parents, continue to participate in the study and to provide information on the second half of the transition picture, their integration into American society. Because this study included both halves of the transition picture and contains information on large numbers of students who are visually impaired, the NLTS2 was identified as the source of data to be used in this study.

History of Transition Services

Underlying Theories or Philosophies

Green and Kochhar-Bryant (2003) stated that transition is “undergird[ed]” (p. 49) by a combination of at least four theories or philosophies. The first of these identified by Green and Kochhar-Bryant was the human potential movement. This philosophy was “founded on the belief that all individuals have a basic desire to grow and develop in positive ways” (p. 49). This philosophy was marked by social policies that reflected society’s responsibility to provide support to individuals with disabilities and that society must defend the basic rights of all citizens (Green & Kochhar-Bryant).

The second of the theories identified by Green and Kochhar-Bryant (2003) was that of general systems theory (Bertalanffy, 1968; Sutherland, 1973). This theory developed a framework to help in the understanding of the complex relationships that exist between systems. Green and Kochhar-Bryant identified the following principles from general systems theory as applicable for transition. Individuals are to be viewed holistically, they need to be understood in terms of their environment or surroundings, and specialists from diverse fields or separate systems must be able to communicate with one another.

A third philosophy identified by Green and Kochhar-Bryant (2003), which underlies the construct of transition, was that of normalization (Bank-Mikkelsen, 1980; Wolfensberger, 1972). This philosophy took root in the United States in the 1970s and helped form the civil rights movement for individuals with disabilities. This philosophy was defined as “letting an individual with a disability obtain an existence as close to the normal as possible” (Green & Kochhar-Bryant, p. 51).

A fourth philosophy identified by Green and Kochhar-Bryant (2003) was that of individual freedom and individuality. The authors stated that over the last century progress has been made with social systems facilitating personal decision-making. The authors stated that as time has progressed, students with disabilities have taken a more active role in decisions about their own future, advocating for themselves, and are becoming more knowledgeable and realistic about their interests, capabilities, and ambitions.

Transition Timeline

Transition is a broad construct that incorporated many elements and has been recognized as important and necessary for students with disabilities for more than 40 years. While the construct may be broad, the idea behind the construct is simple: integration of youth and young adults with disabilities into American society (DeStefano & Snauwaert, 1989). An explanation of the efforts to bring the concept of transition to fruition follows.

Work/study programs. In the 1960s cooperative agreements between school districts and vocational rehabilitation agencies allowed for formal relationships whereby students with disabilities attended school half the day and worked the other half of the

day (Halpern, 1991). Each of these agreements was often centered on the assignment of teachers who taught the students half the day and assisted students at a job the other half of the day. This program had the benefits of easing students into the adult world, and vastly increasing the numbers of students who participated in the program. The program was also flawed, which led to the work/study program downfall. The most serious of the flaws was the funding mechanism. Vocational rehabilitation agencies were not able to pay for services that were the responsibility of other agencies. With the passage of the Education for All Handicapped Children Act in 1975, some interpreted the new law to mean work experience was now the responsibility of local school districts, meaning vocation rehabilitation agencies could no longer fund the program (Halpern, 1991).

The Rehabilitation Act of 1973. This law and specifically Section 504 of this law was a precursor to the Education for All Handicapped Children Act (1975) (DeStefano & Snauwaert, 1989; Green & Kochhar-Bryant, 2003). Section 504 ensured that no otherwise qualified individual with a disability could be excluded from a program or activity that received federal money, thus opening the door to the public education system for students with disabilities.

Education for All Handicapped Children Act. Although it did not address transition specifically, the passage of PL 94-142, the Education for All Handicapped Children Act (EHA), was the basis for later special education and transition-related legislation. As explained by Ysseldyke, Algozzine, and Thurlow (2000), the EHA was a direct result of the civil rights movement based on the Fourteenth Amendment, which assured equal protection and denied deprivation of “life, liberty, or property, without due process of law” (p. 55). The authors stated that *Brown v. Board of Education* (1954) ruled

that a separate, segregated, education was not an equal education. This finding, carried forward for students with disabilities, was a major factor in the passage of the EHA (Ysseldyke et al.). The EHA, signed into law in 1975, mandated all children with disabilities receive a free appropriate public education and ensured protection of the rights of children with disabilities and their parents (DeStefano & Snauwaert, 1989). It is often viewed as “the landmark piece of federal legislation in special education” (p. 29).

Transition and the EHA. In 1983, the reauthorization of the EHA added the option of transition services (DeStefano & Snauwaert, 1989). With the authorization to provide this type of services, DeStefano and Snauwaert stated that this was an “evolutionary” step towards the achievement of the goal of special education services: postschool integration of students with disabilities into society. The EHA was again reauthorized in 1986, and transition services were reauthorized and expanded as part of the reauthorization (DeStefano & Snauwaert). Greene and Kochhar-Bryant (2003) stated that this was a time of cuts to education budgets, as well as a time when there was little federal oversight of the states’ implementation of the EHA. They also stated that due to the lack of federal oversight, the implementation of the transition services was quite good in some states and virtually nonexistent in others. As Congress realized a successful transition required more than just legislation in the special education arena, complementary regulations were added to the Rehabilitation Act of 1983 and the Carl Perkins Vocational Education Act of 1984 (Reiff & deFur, 1992).

Mandating of services. In 1990, the reauthorization and renaming of the EHA to the Individuals with Disabilities Education Act (IDEA) occurred (Reiff & deFur, 1992). With the reauthorization and renaming to IDEA in 1990, a significant change occurred:

the mandating of transition services to youth with disabilities began at age 16 (Greene & Kochhar-Bryant, 2003). This change to mandated service was due to numerous studies which concluded youth with disabilities were unemployed at much higher percentages than their nondisabled peers upon leaving the public school system (Reiff & deFur). IDEA was reauthorized again in 1997 and was extensively reworked (Greene & Kochhar-Bryant). The findings from the first National Longitudinal Transition Study were instrumental in leading the changes to the transition portion of IDEA 1997, as many findings detailed poor postschool outcomes for students with disabilities (Wagner, Marder et al., 2003). The following is a partial list of transition changes in IDEA '97 documented by Green and Kochhar-Bryant:

1. The age at which transition must be addressed was lowered from 16 to 14.
2. Parents and students must receive notice about their state's age of majority laws one year before the student reached that age.
3. The definition was changed to make sure the student's "needs, preferences, and interests" were taken into consideration.
4. There must be interagency agreements between schools, rehabilitation providers, postsecondary institutions, and community based agencies in order that a seamless transition could take place.

Complementary congressional acts. As with the earlier legislation, such as the Rehabilitation Act in the 1980s, the 1990s saw Congress instituting laws to complement IDEA and assist with the employment of individuals with disabilities in general. The best example of this was the Americans with Disabilities Act, passed into law in 1990 (Greene & Kochhar-Bryant, 2003). This law helped ensure equal access not only to the

environment to which youth with disabilities would be transitioning, but also assured equal access in hiring practices, job retention, and job accommodations as it required employers and other public and private entities to provide reasonable accommodations to individuals with disabilities. (Greene & Kochhar-Bryant).

Transition and IDEA 2004. The latest reauthorization of IDEA in 2004 changed the mandates of transition as well. The age at which transition services were mandated increased to 16 years of age, the term “student” was changed to “child”, and the child must be invited to attend the Individualized Education Plan (IEP) if the purpose of the IEP was to discuss transition services or goals related to transition services (Office of Special Education Programs Topic Brief- Secondary Transition, n.d.). The definition of transition services also changed. It now reads:

The term “transition services” means a coordinated set of activities for a child with a disability that:

Is designed to be within a results-oriented process, that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child’s movement from school to post-school activities, including postsecondary education, vocational education, integrated employment (including supported employment); continuing and adult education, adult services, independent living, or community participation;

Is based on the individual child’s needs, taking into account the child’s strengths, preferences, and interests; and

Includes instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and, if appropriate, acquisition of daily living skills and functional vocational evaluation. [34 CFR 300.43 (a)] [20 U.S.C. 1401(34)] (Office of Special Education Programs Topic Brief- Secondary Transition, n.d.)

Students with Vision Impairments

By definition, students who are identified as being visually impaired are students with disabilities for whom transition services are mandated. However, several factors combine to make transition for these students unique. The following paragraphs highlight those factors.

Expansion for students who are visually impaired. The evolution of transition services for students who are visually impaired has many similarities, but varies markedly from other students with disabilities in several major areas. First, the concept of transition appeared comparatively early in the professional literature (Crawford, 1966; Monahan, Giddan, & Emener, 1978; Sweet-Barnard et al., 2007). Second the professional organization of which many service providers are members is comprised of educational professionals *and* rehabilitation professionals (Holbrook & Koenig, 2000). Finally, specific acts of Congress made sources of employment available to some youth with vision impairments as they entered the workforce (Milkman, 1998; Moore, 2005).

Appearance in the professional literature. In 1986, Haring and McCormick in Holbrook and Koenig (2000), explained the goal of transition is full integration and “transition is a new field” (p. 27). Transition may have been new for some special educators in 1986, but references to it appeared much earlier in the literature pertaining to

the education of students with vision impairments. In an attempt to conduct a meta-analysis on the area of transition and students with vision impairments, Sweet-Bernard et al. (2007) completed a thorough search of the literature from 1965 to 2005 related to the topic of transition. They found the concept of transition for students who were visually impaired was not a new field in 1986. Sweet-Bernard et al. found references to transition as early as 1966 in a document authored by Crawford titled *Career Planning for the Blind: A Manual for Students and Teachers*. Additionally, the word “transition” appeared in the literature in the field of blindness as early as 1978 as evidenced by the Monahan et al. (1978) article, *Blind Students: Transition from High School to College*, published in the *Journal of Visual Impairment & Blindness*.

Membership in professional organizations. Holbrook and Koenig (2000) discussed one additional aspect of transition that was unique as it related to students who were visually impaired. Before the early 1980s the professionals who provided services to adults and children who were visually impaired were members of two different professional organizations. One organization was primarily for educators of school-age children, and the other was primarily for those who worked with adults who were visually impaired. The authors went on to say the opinion of both groups of professionals was that postschool transition should be as smooth and seamless as possible. It was felt a single common professional organization, The Association for the Education and Rehabilitation of the Blind and Visually Impaired, would allow the professionals to come together, to share ideas and to learn from one another in order that the individuals to whom they provided services would have an easier postschool transition (Holbrook & Koenig).

Employment acts for the blind. The Randolph-Sheppard Act and the Javits-Wagner-O'Day (now known as the AbilityOne) Act are two examples of legislation that focus on the employment of individuals who were blind (Milkman, 1998; Moore, 2005). The Randolph-Sheppard Act passed in 1936, commonly known as the Business Enterprise Program, allowed individuals who were legally blind to become licensed to operate vending facilities in government buildings (Moore). The main purpose of the act was to provide individuals who were blind "remunerative employment" (Moore, p. 549).

The Javits-Wagner-O'Day Act, originally passed in 1938 as the Wagner-O'Day Act, mandated the federal government purchase brooms, mops, and other commodities from nonprofit agencies whose employees were blind and made up at least 75% of the direct labor hours of each agency's workforce (Milkman, 1998). In 1971, the act was amended to the Javits-Wagner-O'Day Act and expanded to include individuals with severe disabilities (Milkman). In 2006, the federal agency overseeing the program changed the name to AbilityOne (A Brief History of the AbilityOne Program, n.d.).

Summary

The history of the concept of transition revealed that it was rooted in legislation, beginning with individual civil rights (Ysseldyke et al., 2000). However, several factors unique to the transition of students who are visually impaired were also provided. Some of the factors discussed were transition as a concept started early in the field (Crawford, 1966; Monahan et al., 1978), and the existence of legislation specific to employment for individuals who were visually impaired (Milkman, 1998; Moore, 2005).

As conveyed by the previous paragraphs the topic of transition is broad and includes some unique factors for the student who is visually impaired. Using Will's

(1983) concept of transition as a bridge with a secure foundation built in the secondary school years, the following paragraphs will discuss disability specific skills many (for example see Hatlen, 1996) consider a necessary part of the foundation for students who are visually impaired.

The Expanded Core Curriculum

Description of the Expanded Core Curriculum

The Expanded Core Curriculum (ECC) has been defined as a specific body of knowledge that must be learned by children who are visually impaired in order for them to realize success in school settings, as well as to achieve success as adults (Huebner, Merk-Adam, Stryker, & Wolffe, 2004). Components of the ECC have been present in the literature (and thus in the education of students who were visually impaired) since formalized education of students who were visually impaired began (Erin, 2006; Hatlen, 1996). It has evolved over time, has had much written about it, and has had skill area additions and many names (for example dual-curriculum, disability specific, and add-on curriculum) in its evolution (Erin; Hatlen). In 1996, Hatlen coined the term that is currently in use: the Expanded Core Curriculum. At that time, Hatlen also identified the composition of the individual curriculum areas in the ECC. The skill areas identified by Hatlen included academic compensatory, orientation and mobility, social interaction, independent living skills, recreation and leisure, career education, use of assistive technology, and visual efficiency. In 2003, Hatlen added the area of self-determination as an additional curriculum area to the ECC. This recognition of self-determination as an ECC skill area by Huebner et al. validated Hatlen's 2003 addition, as well as the ECC in its entirety, as the components of the ECC are included in their book, *The National*

Agenda for the Education of Children and Youths with Visual Impairments, Including Those with Multiple Disabilities.

Two areas of the ECC have recently undergone a name change. The area of visual efficiency was changed to sensory efficiency and the area of compensatory academic skills was changed to compensatory access skills (K. Blankenship, personal communication, November 12, 2008). Table 1 provides a list of the ECC skill areas and gives some behavioral examples of skill use.

The Construct of the Expanded Core Curriculum

The supposition underlying the ECC was really quite simple. Students without disabilities learn the skills contained in the ECC in a “casual, unconscious, natural manner” (Huebner et al., 2004, p. 14), whereas students who were visually impaired needed direct, explicit, and thorough instruction to learn the same skills. Direct instruction in the ECC areas for students who were visually impaired was necessary as the skills were related to a student’s vision impairment and were often skills learned incidentally and naturally through observing others by children without disabilities (Hatlen, 1996; Huebner et al.). Heubner et al. provided an excellent example of the importance of the necessity for direct instruction in ECC areas. Using the ECC skill area of orientation and mobility, the authors stated children with sight learned to travel in their world through a “casual, unconscious, and natural” (p. 14) process. The authors went on to say that children with vision impairments can travel in their world as well, but they needed direct, explicit, and thorough instruction in order to do so. Hatlen and Huebner

Table 1

A Description of the Expanded Core Curriculum

ECC Skill Area	Example
Social Interaction	“Aware[ness] of and using appropriate nonverbal communication techniques: gestures, eye contact, raised head, and facial expressions” (Hazekamp & Lundin, 1986, p. 6).
Assistive Technology	“Being cognizant of, and able to use, appropriate special devices for reading and writing...prescribed optical aids, closed –circuit television systems, talking computer, reading machines, and other electronic equipment” (Hazekamp & Lundin, p. 6).
Career Education	“Knowing basic employability skills, including getting to work on time” (Hazekamp & Lundin, p. 12).
Orientation and Mobility	Knowing “about themselves and the environment in which they move from basic body image to independent travel in rural areas and busy cities” (Hatlen, p. 29).
Recreation and Leisure	“Play[ing] indoor and outdoor games appropriately ... developing hobbies of individual interest” (Hazekamp & Lundin, p. 8).
Independent Living	“Performing personal hygiene skills ... dressing skills ... housekeeping skills ... managing money ... [and] preparing food” (Hazekamp & Lundin, p. 11).
Self-Determination	“[Serving] as one’s own advocate in obtaining necessary services, adaptations, and equipment needed for success on a job, during job training, or in college” (Hazekamp & Lundin, p. 12).
Compensatory Access	“Include[s] learning experiences such as concept development, spatial understanding, study and organizational skills, speaking and listening skills, and the adaptations necessary for accessing all areas of the existing core curriculum” (Hatlen, p 29).
Sensory Efficiency	“Thorough, systematic training... students with functional vision can learn to use their remaining vision better and more efficiently” Hatlen, p. 30). “Learning to identify, discriminate, and use various textures and objects tactilely and underfoot” (Hazekamp & Lundin, p. 9).

et al. also theorized that if the ECC skills were not learned, children who were visually impaired would be “at high risk for lonely, isolated, unproductive lives” (Hatlen, p. 30),

and the ECC skills must be learned to allow children who were visually impaired to achieve success as adults.

The age at which students began to receive instruction in the ECC was thought to be important as well. For example, Brambring (2007) stated young children who were visually impaired needed twice as long to learn some aspects of using tools such as spoons or cups when compared to sighted children. Brambring's finding highlighted the need for specialists trained to work with young children with vision impairments to teach them ECC skills in order that such delays can be ameliorated. Ferrell (1998) also demonstrated the value of appropriate instruction. She found that infants and toddlers with visual impairment who received specialized early intervention services, which most likely included elements of the ECC, including instruction by teachers of students with visual impairments and orientation and mobility specialists, pre-braille skills, and independent self-care skills, were assessed on standardized developmental tests and scored within the same range as typically developing children.

In addition, Truan and Trent (1997) found through case studies of three adolescents that the learning of braille, an ECC skill used in many of the ECC areas, increased the participants' feelings of self-worth and increased their self-advocacy. The authors also stated that the learning of this skill led to a work experience for one participant, and the ability for another participant to express himself through writing poetry in braille. Both of these tasks were related to QOL areas and were not possible for the participants before they learned the requisite ECC skill. It was the opinion of Truan and Trent that had these students learned the ECC skill earlier, they would have experienced success earlier as well. Additionally, Curry and Hatlen (1988) hypothesized

that the early learning of the ECC skills is paramount. They surmised that instruction in some skills, such as orientation and mobility, must begin early to allow for the full range of skills in that one particular area to be practiced, learned, and built upon in order for higher level skills to then be practiced, learned, then built upon.

Evidence to Support the Construct

Reviewing the history of the education of students who were visually impaired substantiates the warning issued by Hatlen (1996) and was an affirmation of the Heubner et al. (2004) statement that the learning of skills in the ECC was essential for children who were visually impaired to be successful adults. Examining the history, through two examples of the literature of the time, allowed for an inspection of a large group of students who were visually impaired but who did not receive an education in the ECC skill areas. The following paragraphs provide an explanation.

Students with visual impairments were some of the first students with disabilities to be educated in regular classroom settings with peers who had no disabilities. Beginning in 1900, students with visual impairments were educated in regular classrooms in the Chicago public school system (Holbrook & Koenig, 2000). By 1960, approximately 55% of students with vision impairments were being educated alongside their peers without disabilities in regular classrooms across the nation. This figure rose to approximately 70% by the early 1970s (Lowenfeld, 1975). Common thinking at the time was that through their placement in a setting with nondisabled peers, without direct instruction in the ECC areas such as social skills and independent living skills, this group of students would learn the requisite skills necessary to function in society once they graduated. It was also the thinking and philosophy during these decades that it was not in

the long-term best interests of the students who were visually impaired to remove them from the regular classroom for any type of specialized instruction (Curry & Hatlen, 1988).

As large numbers of students who had received a public education with this philosophical underpinning began to leave school in the 1970s, anecdotal evidence began to surface that indicated these students did not become successful, independent adults (Hatlen, LeDuc, & Canter, 1975; Martin & Hoben, 1977; Morrison, 1974). Although it is only an anecdotal account, Morrison gave many examples of how she worked with young adults who had no age appropriate independent living skills. Morrison worked with youth, 14 to 22 years of age whose only identified disability was a vision impairment, who did not know how to pour liquids from a pitcher, use an oven, make a peanut butter sandwich, grocery shop, or manage a checkbook. Morrison described how she worked with students from all parts of the country and from the various placement options of regular schools, resource rooms, and residential schools. Based on Morrison's anecdotal accounts, it seemed Hatlen (1996) and Huebner et al. (2004) were correct: A lack of explicit instruction in the ECC skill areas led to an unsuccessful adult life.

Martin and Hoben (1977) also illustrated the necessity of the ECC skills. In conducting a case study analysis of a student named Jay, the authors determined simply placing a student with a vision impairment in a classroom with peers who had no disabilities did not adequately meet the compensatory access needs of the student who was visually impaired. By the fourth grade, the authors stated Jay was more than one academic year behind his peers. In the beginning of Jay's fourth grade year, an intervention occurred. Jay started to receive services from a teacher of the visually

impaired. He learned the necessary compensatory access and sensory efficiency skills of using optical devices, gathering information auditorily, using large print books, using an abacus for math, and typing of assignments. By the eighth grade, Jay was getting average grades at grade level. Jay was also taught how to interact socially with others. By the eighth grade, Jay had a small group of friends and was not a social isolate as he was in the fourth grade. Jay's success story also corroborated the theory set forth by Hatlen (1996) and Huebner et al. (2004): instruction in the ECC skills can lead to greater success in school settings.

A Paradigm Shift

With many anecdotal stories, such as the ones presented in the preceding paragraphs, professionals in the field of educating students who were visually impaired determined two things. First, teaching compensatory access skills and other ECC skills was necessary for students to be successful in a school environment. Second, simply placing students with vision impairments with peers who were not disabled was not sufficient to ensure postschool success for students who were visually impaired (Curry & Hatlen, 1988).

As a result of information such as that provided by Morrison (1974) and Martin and Hoben (1977), the 1980s saw a paradigm shift in the education of students who were visually impaired as individuals began advocating for a disability-specific curriculum (for example see Alonso, 1986; Curry & Hatlen, 1988; Hatlen & Curry, 1987). In addition, state departments of education began to develop policy guidelines which incorporated almost all of the ECC as we know it today (for example, see Hazekamp & Lundin, 1986).

Current Research Concerning Anticipated Outcomes

A significant amount of recent research centered on provision of the ECC rather than, as in the 1970s, a need for an ECC. Even though documentation for the need of the ECC has been present in the literature since the 1970s (Alonso, 1986; Curry & Hatlen, 1988; Hatlen & Curry, 1987; Hatlen et al., 1975; Morrison, 1974) provision of the skills contained in the ECC seemed problematic (Agran, Hong, & Blankenship, 2007; Correa-Torres & Howell, 2004; Griffin-Shirley et al., 2004; Wolffe et al., 2002).

A portion of the problem with provision lies in the educational model whereby the vast majority of students received instruction in the ECC skill areas. An itinerant teaching model is typically used to provide special education services (Correa-Torres & Howell, 2004) to the 87% of all students who were visually impaired and received their education in the regular classroom setting (U.S. Department of Education, 2007). In this model, Correa-Torres and Howell explained that teachers of the visually impaired (TVI) travel from school to school to teach students. In a survey of teachers of the visually impaired from a western state, Correa-Torres and Howell found approximately 50% of the teachers' time was spent working directly with students. The rest of the time was spent traveling, in consultation with other professionals, adapting materials, and other job related tasks. If TVIs were spending only 50% of their time with students, the time left for instruction in the ECC areas was extremely limited.

A second component of the provision issue is the quality of the time teachers of the visually impaired spent with their students. Wolffe et al. (2002) in a survey of 18 teachers of the visually impaired in six different states found approximately 40% of the

time a teacher of the visually impaired spent with a student is time spent in tutoring or on academics. The authors reported the 40% included such things as reviewing concepts, content, and material for tests, and teaching basic study skills. These results were consistent with a finding from Agran et al., 2007. In their survey of 183 teachers of the visually impaired in 40 different states, the authors found 60% of the teachers of the visually impaired were responsible for the academic curriculum of their students with vision impairments. While few would question the value of academics, Hatlen (1996) and Wolffe et al. suggested it should not be the role of the teacher of the visually impaired. Rather, these authors suggested the role of the teacher of students who were visually impaired should be teaching ECC skills as TVIs were the only educational providers who had the necessary skills and training to teach the ECC, while there were many in a school setting who could teach or academics.

The ECC lacks implementation fidelity as evidenced by the research described above. The theory behind the ECC stated skill attainment in areas of the ECC was necessary for children who were visually impaired in order for those same children to have successful lives as adults (Hatlen, 1996; Huebner et al., 2004). The current implementation research (Agran et al., 2007; Correa-Torres & Howell, 2004; Griffin-Shirley et al., 2004; Wolffe et al., 2002) suggested students who were visually impaired were not receiving the requisite ECC skills. Thus, following the logic of the theory, adverse outcomes for students who were visually impaired was expected. Additionally, one can analyze the results of the aforementioned studies using Will's (1983) construct and model of what is necessary for a successful postschool transition. Will's construct utilized a model of a bridge with a firm, skill-based foundation in a student's secondary

school years being the basis on which a successful transition, or crossover, to adulthood is made. As the research discussed in this section has shown, the specialized skill based instruction for students who were visually impaired was not happening due to the limited amount and poor quality of time teachers of the visually impaired spent with their students. If instruction cannot take place, students will not learn skills and the foundation upon which postschool success was built will be weakened leading to diminished outcomes.

Summary

The skills of the Expanded Core Curriculum and examples of each skill area were provided. The supposition that students who were visually impaired need direct, thorough and explicit instruction in the areas of the ECC in order to achieve success in school and later adult life was established and corroborated by reviewing literature from the 1970s. The literature of that time period was used as large percentages of children were being educated in a regular classroom setting (Lowenfeld, 1975), under the philosophical belief that placement, by itself, with nondisabled peers was enough to ensure school and postschool success (Curry & Hatlen, 1988).

Some questioned the extent to which students who were visually impaired were currently receiving instruction in the ECC areas (Agran et al., 2007; Correa-Torres & Howell, 2004; Wolffe et al., 2002). Due to a lack of fidelity in provision of instruction, it was hypothesized, based on the construct set forth by Will (1983), Hatlen (1996), and Huebner et al. (2004), students who were visually impaired would have postschool outcomes that were less than desirable.

The supposition set forth by Hatlen (1996) and Huebner et al. (2004) did not define postschool success; it simply stated instruction in the ECC was necessary to attain success in adulthood. As such, postschool success was examined through a quality of life structure. Halpern (1993) stated examination of transition and postschool outcomes was best conducted through the multifaceted lens of quality of life (QOL) domains. The following paragraphs describe the current literature, for youth and adults who are visually impaired, using Halpern's QOL domains.

Quality of Life

Quality of Life Operationally Defined

Schalock (1990) explained examining a person's quality of life as an outcome measure of the education system was a practice which began in the 1980s, primarily with individuals who were cognitively disabled. However, research with individuals who were visually impaired and their quality of life had been conducted as well (for example, see: Good, LaGrow, & Alpass, 2008; La Grow, 2004; Rimmerman & Morgenstem, 2003; Shaw, Gold, & Wolffe, 2007), although it was primarily related to older adults who were visually impaired.

Turnbull, Turnbull, Wehmeyer, and Park (2003) explained that, while many definitions of quality of life existed, there is consensus that quality of life contained many dimensions developed from both subjective and objective measurements. The authors stated quality of life can be difficult to measure, but measurement typically occurred through the use of surveys or questionnaires completed by the person who is disabled or by a parent or sibling very knowledgeable about the individual.

Wehmeyer and Schalock (2001) stated examining QOL and youth who have in the past or who currently are receiving special education services served three purposes. The first purpose was to heighten awareness of the individual and the individual's environment for those working with the individual. The second purpose was as an overarching social construct used to measure an individual's life in order that it may be improved or enhanced. The third purpose was one of unification, which allowed for the building of a framework to examine the "multidimensionality of a life of quality" (para. 27).

The second purpose identified by Wehmeyer and Schalock (2001) was the driving force behind this research. The utilization of Halpern's (1993) domains operationally defined how the social construct of quality of life was measured in this study.

Halpern's (1993) quality of life domains, measures, and a brief description of each are represented in Table 2. Hatlen (1996) and Huebner et al. (2004) posited it is necessary for children who were visually impaired to learn the skills of the Expanded Core Curriculum in order for those same children to be successful adults. Halpern's measures were used to examine the extent to which the idea posited by Hatlen and Huebner et al. was pertinent.

Other Studies that have Used Halpern's Work

In 1997, as part of her dissertation, Cameto examined the extent to which Halpern's 1990 model of quality of life was appropriate to use with data collected by the original National Longitudinal Transition Study. Although Halpern's 1990 outcomes were not exactly the same as the outcomes used in the 1993 model presented above, they were similar. Cameto determined through factor analysis that the Halpern outcome

Table 2

A Listing and Description of Halpern's Quality of Life Measures

Halpern's Quality of Life Domains and Measures	Description
<p>Physical and Material Well Being</p> <ol style="list-style-type: none"> 1. Physical and mental health 2. Food, clothing and lodging 3. Financial security 4. Safety from harm 	<p>“The outcomes in this domain should be available to everyone to experience a basic quality of life ... [They include]; preventing or coping with health problems, freedom from severe hunger or homelessness, enough income ... to avoid total impoverishment, and a living environment that does not place a person in constant jeopardy of physical or emotional harm” (Halpern, 1993, p. 490)</p>
<p>Performance of Adult Roles</p> <ol style="list-style-type: none"> 1. Mobility and community access 2. Vocation, career and employment 3. Leisure and recreation 4. Personal relationships and social networks 5. Educational attainment 6. Spiritual fulfillment 7. Citizenship 8. Social responsibility 	<p>The measures in this domain often are reflections of how a person interacts within his or her community. Skills such as the following are often measured; “uses some form of transportation effectively ... has a job reflecting a career interest ... uses free time to pursue interests ... maintains positive involvement with friends ... earns a high school diploma ... participates in spiritual activities of choice ... votes ... doesn't break laws” (Halpern, pp. 490-491).</p>
<p>Personal Fulfillment</p> <ol style="list-style-type: none"> 1. Happiness 2. Satisfaction 3. Sense of general well-being 	<p>These measures all assume the ability to make personal choices and are person centered. Happiness is measured by what is happening at a particular moment. Satisfaction covers a longer time period, but is often role dependent. General well-being is the most durable, and is synonymous with self-concept or self-esteem (Halpern, 1993).</p>

measures of employment, social integration, and independence were valid for use with the original National Longitudinal Transition Study data.

The National Longitudinal Transition Study 2 (NLTS2) was patterned after the original study in many regards. In addition, Halpern's 1990 and 1993 models are similar; therefore, the use of Halpern's (1993) measures from Table 2 with the data from the

National Longitudinal Transition Study 2 was appropriate to examine the supposition set forth by Hatlen (1996) and Huebner et al. (2004).

The following studies concerning QOL and individuals who were visually impaired did not mention Halpern by name, nor did they indicate usage of his model to explore outcomes. As such, they were not included in this section. However, they certainly measured aspects of the QOL domains identified by Halpern and as such warrant discussion here.

Halpern's Outcome Measures and Individuals who are Visually Impaired

A number of authors (Cimarolli & Wang, 2006; Corn & Sacks, 1994; DeLaGarza & Erin, 1993; Elliott & Kuyk, 1994; Lieberman & McHugh, 2001; Oddo & Sitlington, 2002; Skaggs & Hopper, 1996; Swanson & McGwin, 2004) focused on measuring various aspects of quality of life indicators, as a portion or conclusion of their particular study. A representative sample of the type of studies listed above is described below to exemplify quality of life issues as they related to individuals who were visually impaired. As Hatlen (1996) and Huebner et al. (2004) posited, acquisition of the skills in the ECC will affect each of the domains and measures in the QOL areas.

Physical and material well being. The physical fitness of students who were visually impaired may be less than that of students who were not disabled. Skaggs and Hopper (1996) reviewed studies that were published between 1950 and 1993 and found 11 that related to physical fitness and children who were visually impaired. Most of the studies measured cardiovascular endurance, muscular endurance, and flexibility. In reviewing the articles, the authors reported individuals who were visually impaired scored significantly lower than individuals who were not visually impaired. In addition,

they found that severity of visual impairment and age of onset both influenced the degree to which individuals who were visually impaired were considered physically fit. In general, they found individuals who became visually impaired later in life and those individuals with better visual acuity performed better on the selected measures.

In a later study, Lieberman and McHugh (2001) compared the results of the performance of 46 students who were blind or visually impaired to those who were not visually impaired. They stated less than 20% of the visually impaired students passed tests of fitness which measured performance in the one-mile walk/run, body mass index, arm strength, sit and reach, and curl-ups. The authors compared that figure to data collected from two National Children and Youth Fitness Surveys. The national surveys found that 48–70% of children without a vision impairment passed these same types of tests.

Using the results from the two physical fitness studies (Lieberman & McHugh, 2001; Skaggs & Hopper, 1996), which actually incorporated results from 12 different studies it appeared that at least the physical well-being portion of this domain for individuals who were visually impaired lagged behind that of individuals who were sighted. All the other indicators in this domain seem closely linked to income. Given the high unemployment rate of individuals who are visually impaired, it could be posited that individuals who are visually impaired lag behind the sighted population in the indicators of food, clothing, and lodging, and financial security, as well.

Performance of adult roles. This domain contained the largest number of outcome indicators and contained some very excellent information on one of the outcomes,

employment. Although employment is a single QOL outcome measure it affects many of the other QOL measures (Halpern, 1993; Will, 1983).

In the past decade, a handful of studies (Houtenville, 2003; Kirchner & Schmeidler, 1997; Trupin et al., 1997) have investigated the unemployment rate of adults who were blind or significantly visually impaired. The study completed by Kirchner and Schmeidler used data from the U.S. Census Bureau and the National Center for Health Statistics, and found 26% of people with a “severe functional limitation in seeing print were employed” (p. 510). Houtenville compiled data from the National Health Interview Survey conducted by the National Center for Health Statistics, and found the employment rate of noninstitutionalized blind adults ranging in age from 25 to 61, and pooled for the years 1983 through 1996, was 28.2%. Trupin et al. found similar results. In the years 1983 through 1994, Trupin et al. reported the labor force participation rate for adults 18 to 64 who were blind in both eyes to be 30.1%. As a contrast, the employment rate for the nondisabled population is approximately 80% (Houtenville, 2006).

One caveat concerning the aforementioned employment rates: While they are extremely low, not all the individuals included in the surveys were visually impaired and graduates of the public education system. A certain percentage lost their vision after they left the public education system from the result of disease or accident. Others may have been in the education system before students with disabilities were entitled to a free and appropriate education under the Education of all Handicapped Children Act (EHA), now IDEA. The data collected in these surveys did not take age of onset into consideration or, if they did, the authors did not report it.

Although not specifically listed by Halpern (1993), activities of daily living could be included in the Performance of Adult Roles domain. Halpern indicated the domain of Performance of Adults Roles has been and currently is called independent living in some instances. While it may appear that these skills would fit better in the food, clothing, and lodging measures of the Physical and Material Well Being domain, Halpern stated the Physical and Material Well Being domain is freedom from hunger and/or homelessness rather than having the ability to perform skills related to independent living.

Using data from the 1995 National Health Interview Survey, Swanson and McGwin (2004) found that of the approximately 67,000 individuals who reported they had a severe difficulty with vision or who were legally blind, only 2.9% of them reported any difficulty in one of the six areas included in the activities of daily living (ADL) measure. The areas measured in the survey included bathing, dressing, eating, transferring, toileting, and getting around the home. The authors also reported on the areas of instrumental activities of daily living (IADL). These activities include such items as preparing meals, shopping, using money, using the telephone, and doing housework. Of those who reported a severe difficulty with vision or who were legally blind, 7.9% of them reported a difficulty with at least one IADL. Swanson and McGwin concluded that the prevalence of having difficulty with an ADL or IADL increased as the amount of vision loss increased and as the age of the participants increased. An interesting finding of the study was younger adults, ages 18 to 24, had a greater chance of experiencing difficulty with both an ADL and an IADL than did the older adults.

Studies following graduates from residential schools for the blind (DeLaGarza & Erin, 1993; Oddo & Sitlington, 2002) have measured quality of life indicators as part of

the data collection process. DeLaGarza and Erin found that for 70 students who graduated from the Texas School for the Blind in the years 1985 to 1990, quality of life measures in the performance of adult roles domain were rated highly. The graduates felt they were independent and integrated into the community. Oddo and Sitlington reported 14, or 93% of the total number of students who graduated in the years 1993-1996, responded to the survey. The authors found 43% enrolled in postsecondary education, 21% living independently, and 71% involved in at least six leisure activities.

In a telephone survey of 86 visually impaired adults who had received services from a rehabilitation agency, Boerner and Cimarolli (2005) found the participants' vision loss significantly interfered with four of the eight different outcome measures in Halpern's (1993) domain of performance of adult roles. The areas identified in the survey included work, personal care, leisure and hobbies, religion, and relationships between their partner, family, and friends. The authors did not indicate if they investigated other domains in addition to the ones they found discrepant.

Personal fulfillment. Several studies compared the well-being of students who are visually impaired to that of sighted students (Huurre & Aro, 1998; Kef & Dekovic, 2004; Rosenblum, 1998). In general, they found that there was no difference in the well-being of students who were visually impaired compared to that of students who were sighted. In a study that examined adolescents who were visually impaired in Finnish regular schools, Huurre and Aro found that visually impaired and sighted students did not differ significantly on measures of depression or loneliness, or in their relations with peers and siblings. Rosenblum found similar results in her study that determined friendships that existed between students who were blind and visually impaired with students who did not

have a vision impairment did not differ from those of typical adolescents. Finally, Kef and Dekovic compared adolescents in the Netherlands and found that visually impaired and sighted adolescents did not differ in their overall well-being. They did find a difference between the two groups on the source of their well-being. Students who were visually impaired placed more value on peer support for their well-being, while sighted students place more importance on parental support for their well-being.

Summary

Using the information reported in the previous paragraphs regarding quality of life outcomes, it would seem a large percentage of individuals who were visually impaired may have had lower than expected QOL outcomes. This was indicated by positive but questionable findings in the domains of Performance of Adult Roles (Swanson & McGwin, 2004), and positive findings in the Personal Fulfillment domain (Huurre & Aro, 1998; Kef & Dekovic, 2004). However, when these positive findings were contrasted against other low outcomes such as employment rate, fitness scores, and measures of independence (Boerner & Cimarolli, 2005; Houtenville, 2003; Kirchner & Schmeidler, 1997; Lieberman & McHugh, 2001; Skaggs & Hopper, 1996; Trupin et al., 1997), there was an indication further research is necessary to determine which skills were necessary to build the solid bridge described by Will (1983) and to ameliorate the prediction by Hatlen (1996) of adults who were visually impaired leading lonely, unproductive lives due to a lack of instruction in the ECC.

The National Longitudinal Transition Study 2

Description of the Study

The National Longitudinal Transition Study 2 (NLTS2), funded by the United States Department of Education, gathered and will continue to gather data from school districts, parents of students with disabilities, the educators of students with disabilities, and from students with disabilities. The NLTS2 began in the 2000-2001 school year with students who were in at least grade 7 or between the ages of 13 and 16 and will continue through the 2009-2010 school year. The sample of students allowed the results to be generalized to students with disabilities in general, as well as to each of the 12 individual disability categories set forth by the federal government (Levine, Marder, & Wagner, 2004). The NLTS2 captured information related to each of the ECC areas, with the exception of sensory efficiency, while students were in school. The NLTS2 also captured information in each of Halpern's (1993) QOL domains for youth that were out of school. As such, this study used the data gathered by the NLTS2 as the primary and only source of data.

ECC Areas Reflected in the NLTS2

Through a series of reports and fact sheets, the NLTS2 provided descriptive data related to each of the ECC areas, with the exception of sensory efficiency skills. The following paragraphs report on descriptive findings from the NLTS2 as it related to the ECC and students who were visually impaired participating in the NLTS2.

Compensatory access skills. One of the items of information gathered by the NLTS2 was high school completion rate. As one of the ECC areas was compensatory access skills, it seems logical there may be a relationship between graduation rates and

compensatory access skills. Compensatory academic skills were identified as those skills, such as braille, taught to students who are visually impaired to allow them to participate fully in a regular classroom setting (Hatlen, 1996). According to Wagner et al. (2005), the graduation rates for students with vision impairments was 95% in 2003. Additionally the authors reported that of those graduating, over 99% did so with a regular diploma.

Assistive technology and orientation and mobility. Levine et al. (2004) reported in the areas of assistive technology and orientation and mobility. The authors stated 57% of the parents reported their child received assistive technology services, and 47% of parents reported their child received orientation and mobility services.

Leisure and recreation skills. Wagner, Cadwallader et al. (2003) reported findings which can be included in the recreation and leisure skills area of the ECC. They report approximately 80% of students who were visually impaired had participated in some type of extracurricular activity. The authors also reported on the use of free time. They reported 52% of students who were visually impaired spent time watching television. This was followed by working on hobbies or reading, 48%; listening to music, 39%; and using a computer, 35%.

Independent living skills. In the area of independent living skills Wagner, Newman, Cameto, and Levine (2006) reported that on a measure of broad independence skills, 68% of students who were visually impaired scored more than six standard deviations below the mean on the Scales of Independent Behavior-Revised (SIB-R). The authors explained a score of six or more standard deviations below the mean would equate to an age appropriate skill being impossible or nearly impossible to complete for an individual who received such a score. The authors went on to report 80% of students

with a vision impairment scored two or more standard deviations below the mean on the SIB-R, while only 2 percent of the general population had scores in that range. However, only a subset of students who were visually impaired were assessed with this tool. If a determination was made that it was not appropriate for a student to be academically assessed “because their sensory, physical, behavioral, or cognitive disabilities made them unable to follow instructions or answer questions” (Wagner et al., p. 4), the students were then assessed with the SIB-R. As such, this subset sample may not be representative of other students with visual impairments.

Social skills. Wagner et al. (2006) examined the social interaction of students with disabilities. The social interaction of students with vision impairments could be an indication of the extent to which these students possess social interaction skills, an ECC skill identified by Hatlen (1996). Through interviewing parents, the authors found 14% of students who were visually impaired never visited with friends and 33% rarely or never received phone calls. Conversely, they found that 18% visited with friends frequently and 57% frequently received phone calls from friends. Additionally, Wagner et al. found 78% of students who were visually impaired had been invited to another student’s social activity and 38% have participated in an online chat room, while only 4% had done neither of these activities.

Career education. In the ECC area of career education, Wagner, Newman, Cameto, Levine and Marder (2003) found approximately 50% of students with vision impairments took some type of vocational education class. The authors reported approximately 50% of students with vision impairments in vocational education classes

received some type of career counseling, 30% received job readiness training, and 25% received job search instruction.

Self-determination. In the ECC area of self-determination, the NLTS2 used selected items from the Arc Self-Determination Scale (Wehmeyer & Kelchner, 1995). Item selection was based on the item's face validity and factor loading in the areas of: Personal Autonomy, Autonomy in Career Planning, Self-Realization, and Physiological Empowerment. The survey was administered to the youth in the NLTS2 who were at least 16 years of age in 2002 or 2004. Rating scales were used to gather information on the four areas above. The responses in each category were summed and categorized as low, medium, or high. The results were reported as percentages of youth who had scores in one of the three categories with results disaggregated by disability category (*Facts from OSEP's National Longitudinal Studies: The self-determination of youth with disabilities, 2005*).

Generally, youth who were visually impaired seemed to score very well in the area of self-determination, with over 90% of youth scoring in the medium or high category in each of the four broad areas measured. The results, with the exception of the Autonomy in Career Planning area, follow the same general pattern of the greatest percentage of students having scores that rank them in the high category. See Table 3 for a percentage breakdown by self-determination area and a list of questions asked of the youth.

Summary

The NLTS2 is a 10-year longitudinal study designed to gather a wide range of information about students with disabilities as they progress through their secondary

Table 3

Self-Determination Scores of Youth who were Visually Impaired from the NLTS2

Self-Determination Area	% who Scored	Questions Asked of Youth
Personal Autonomy (Range 10 – 40)	Low 1% (10 – 20)	I keep my own personal items together.
	Medium 45% (21-30)	I keep good personal care and grooming. I make friends with other kids my age.
	High 53% (31-40)	I keep my appointments and meetings. I plan weekend activities that I like to do. I am involved in school-related activities. I volunteer for things that I am interested in. I go to restaurants that I like. I choose gifts to give to family and friends. I choose how to spend my personal money.
Autonomy in Career Planning (Range 5 – 20)	Low 9% (5 – 9)	I work on schoolwork that will improve my career chances.
	Medium 64% (10 – 15)	I do school and free time activities based on my career interests.
	High 28% (16 – 20)	I make long-range career plans. I work or have worked to earn money. I am in or have been in career or job classes or training.
Self-realization (Range 5 – 20)	Low 1% (5-9)	I can like people even if I don't agree with them. I know what I do best.
	Medium 41% (10-15)	I like myself. I know how to make up for my limitations.
	High 59% (16 – 20)	I am confident in my abilities.
Psychological Empowerment (Range 0 – 6)	Low 2% (0 – 2)	I tell others when I have a new or different opinion, or I usually agree with others' opinions and/or ideas.
	Medium 12% (3 – 4)	I can make my own decisions, or Other people make decisions for me.
	High 87% (5 – 6)	I can get what I want by working hard, or I need good luck to get what I want. I keep trying even after I get something wrong, or It is no use to keep trying because it will not work. I usually make good choices, or I usually do not make good choices. I will be able to make choices that are important to me, or My choices will not be honored.

Note. Adapted from *Facts from OSEP's national longitudinal studies: The self-determination of youth with disabilities* (2005). Menlo Park, CA: SRI International.

school years and beyond. Due to the sampling procedures, results from the study can be used to describe students in each of the 12 federally recognized disability categories, as well as students with disabilities as a whole. The NLTS2 captured or is capturing information about students who were visually impaired from a variety of sources. These sources included school records, teacher reports, and reports from parents and the students themselves. The information reported in this section was limited to areas related to the ECC. A brief description of skill attainment or use was provided for each ECC area.

Given the wide range of instruments used and the topics searched, the findings were mixed. However, some seemed to be quite alarming. Placing the findings from the NLTS2 into the larger context of the construct expressed by Hatlen (1996) and Huebner et al. (2004), vast majorities of students were not getting instruction in the ECC areas thus hampering their prospects for future outcomes. Cases in point included areas of orientation and mobility and assistive technology. Research has shown the three greatest barriers to employment that need to be overcome are the attitudes of employers, transportation issues, and issues related to accessing print (Butler, Crudden, Sansing, & LeJeune, 2002; Crudden, McBroom, Skinner, & Moore, 1998; Crudden, Sansing, & Butler, 2005; Crudden, Williams, McBroom, & Moore, 2002; Menz, Eggers, Wehman, & Brooke, 1997; O'Day, 1999; Ward, 1992). Two of those barriers, transportation issues and access to print, were specifically addressed by the ECC areas of orientation and mobility and assistive technology. Yet, only 47% and 57%, respectively, of students received those services as part of their education (Levine et al., 2004).

Conversely, some of the findings were quite positive. For example, 95% of students with a visual impairment were graduating from high school (Wagner et al., 2005). Additionally, in the area of self-determination, over 90% of students scored at least in the medium or high range on all categories of the self-determination assessment. Wehmeyer and Schalock (2001) propose that self-determination is a necessary, mandatory stepping stone to achieve any type of quality of life.

Halpern's QOL Domains Reflected in the NLTS2

The NLTS2 captured information related to each of the outcome measures in Halpern's (1993) QOL model. This information was captured solely using interviews of youth or parents of youth once they left the public education system. The information was gathered by telephone surveys in most instances.

Physical and material well-being. Wagner, Marder et al. (2003), through the use of a parent or youth survey as part of the NLTS2, concluded the general health of students who are visually impaired is good to very good or excellent for over 90% of the students and youth. This figure is very comparable to the general population at 94% (Wagner, Marder et al., 2003).

Performance of adult roles. The NLTS2 captured information related to the outcome measures of vocation career and employment, leisure and recreation, personal relationships and social networks, educational attainment, citizenship, and social responsibility. The following information was collected as part of the wave 2 data collection process through interviewing parents or youth who were visually impaired (Wagner et al., 2005). The employment picture continued to look bleak as the employment rate for students who were visually impaired was 28%. The leisure and

recreation activities of youth who were visually impaired were as follows: watched TV/videos 35%, used a computer 22%, listened to music 19%, performed a hobby or read for pleasure 21%, talked on the phone 6%, and played sports 7%. In the area of personal relationships and social networks, 42% saw friends outside of work or school at least weekly, 37% participated in a community group, and 47% volunteered. In the area of educational attainment, 41% attended a two-year college, 41% attended a four-year college or university and 8% attended vocational school. In the area of citizenship, 62% registered to vote. Finally in the area of social responsibility, 24% had been stopped by police for reasons other than a traffic violation, 6% had been arrested, 2% had spent a night in jail, 1% had been on probation or parole (Wagner et al.).

Personal fulfillment. Outcomes in the domain were captured as part of the outcome data of the NLTS2. However, the reports concerning outcomes from the NLTS2 were from wave 2 only. As such, the information pertaining to the measures in this domain have yet to be released.

Summary

To explain the degree to which instruction was taking place and skills were being learned, the various reports and fact sheets developed from the NLTS2 provided a nationally representative description of the extent to which services were being provided (Levine et al., 2004; Wagner, Newman et al., 2003). Perhaps more importantly, the NLTS2 also provided information on student skill attainment (*Facts from OSEP's National Longitudinal Studies: The self-determination of youth with disabilities*, 2005; Wagner, Cadwallader et al., 2003; Wagner et al., 2005, 2006).

What remained for examination was the extent to which the ECC skill provision and attainment previously described translated to QOL outcomes for students with vision impairments. Currently a very good description, using the data from the NLTS2, of the present state of the education of students who were visually impaired exists. Additionally, the NLTS2 does an excellent job capturing information on QOL outcomes for students who were visually impaired. A needed next step was alignment of the ECC skill provision and attainment data with the QOL outcomes of the youth in the NLTS2. Shaw et al., (2007) have aligned similar data in such a way, using data from a Canadian youth study similar to the NLTS2. They have shown employment was positively correlated ($r = .209, p < .001$) to greater involvement in daily living skills. However, additional questions remained concerning the ECC and QOL outcomes. For example, were the 28% of students who were employed 2 years after high school (Wagner et al., 2005) part of the approximately 50% who received instruction in orientation and mobility (Levine et al., 2004) or career education (Wagner, Newman et al., 2003)? It is imperative to find answers to questions such as these in order to design effective educational programs for students with vision impairments and to strengthen policies and regulations concerning the education of students who are visually impaired.

Summary

As the purpose of this research was to examine the specialized factors in the secondary education of students who were visually impaired that were associated with greater postschool quality of life outcomes, this chapter began with the very broad topic of transition. Although transition is now a mandatory, outcome-oriented component of an IEP when a student with a disability turns 16 (Office of Special Education Programs

Topic Brief- Secondary Transition, n.d.), this was not always the case. As such, the history of federally mandated transition as we know it today was traced. As students who were visually impaired were a subset of students who were disabled, three unique factors concerning transition for students who were visually impaired were identified and discussed. The factors identified included: an all-encompassing professional organization, differentiated federal employment programs, and an early appearance of transition in the literature of the field (Crawford, 1966; Holbrook & Koenig, 2000; Milkman, 1998; Monahan et al., 1978; Moore, 2005; Sweet-Barnard et al., 2007).

The next section of the chapter focused on the Expanded Core Curriculum, as the skills contained within this curriculum were the independent variables in this study. The skill areas contained within the ECC were identified and examples were given for each skill area. The philosophical and theoretical underpinnings of the ECC were discussed. Examples of outcomes for students from the 1970s both in and out of school who did not receive instruction in the ECC skill areas were provided. It was stated that a paradigm shift towards the necessity of an ECC occurred in the 1980s (Alonso, 1986; Curry & Hatlen, 1988; Hatlen & Curry, 1987) due to a noticeable lack of positive postschool outcomes in earlier decades (Hatlen et al., 1975; Martin & Hoben, 1977; Morrison, 1974). Next, a description of the current provision and quality of services by teachers in the profession was provided (Agran et al., 2007; Correa-Torres & Howell, 2004; Wolffe et al., 2002). Using the construct supplied by Hatlen (1996) and Huebner et al. (2004), less than desirable outcomes for students who were visually impaired were predicted.

The next section of the chapter focused on quality of life. A model developed by Halpern (1993) to operationally define success through the lens of quality of life

outcomes for youth as they transition from secondary school was discussed. Studies that examined QOL for individuals who were visually impaired were examined, and it was determined the outcomes were lower than expected.

The chapter concluded with a description of the NLTS2 as data collected from that study were used to answer the three research questions of this study. The NLTS2 was chosen as the data source as it was developed to represent students who were visually impaired, captured information concerning almost all of the ECC skill areas, and has outcome data for a number of years in each of Halpern's (1993) QOL areas (Levine et al., 2004).

CHAPTER III

METHODOLOGY

The purpose of this study was to determine the relationship between instruction in the Expanded Core Curriculum as identified by Hatlen (1996, 2003) and selected postschool quality of life outcomes identified by Halpern (1993) for secondary students who are visually impaired. To that end, the data from the National Longitudinal Transition Study 2 were used to answer the following research questions.

- Q1 Is there a difference in quality of life outcomes for students who are visually impaired and who received instruction in the Expanded Core Curriculum areas versus quality of life outcomes for students who are visually impaired and who did not receive instruction in the Expanded Core Curriculum areas?
- Q2 Which Expanded Core Curriculum area or combination of areas best predicts postschool quality of life?
- Q3 After controlling for instruction in the Expanded Core Curriculum, is the relationship between postschool quality of life and age when a participant started to receive services for his or her vision impairment statistically significant?

This chapter begins with a description of the sample, and how participants were chosen to be in the sample. The National Longitudinal Transition Study 2 (NLTS2) used a stratified, weighted sampling procedure to ensure representativeness of the larger population, thus allowing the results to be generalized to students with disabilities in general. In addition, the sampling allowed the results to be disaggregated by disability

category and to also be generalized to each federally identified disability group (SRI International, 2000c).

The instruments used to gather the data are explained in the next section. Each description of each instrument contains the expected response rate, as well as an estimate for completion time. Actual response rates and times have yet to be reported. Table 4 is provided to illustrate the instrument schedule over the 10 year period the NLTS2 is being conducted.

Table 4

NLTS2 Data Collection Instruments and Timeline

Instrument	Data Collection Year									
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Parent Interview	x		x		x		x		x	
Youth Interview			x		x		x		x	
Direct Assessment		x		x						
Teacher Survey		x		x						
School Program		x		x						
School Characteristics		x								
Transcripts		x	x	x	x	x	x	x	x	

Note. x indicates time period in which data were collected. From SRI International (2000a). *National longitudinal study-2 (NLTS2). Study design, timeline and data collection plan*. Menlo Park, CA: Author. Retrieved October 30, 2008, from http://www.nlts2.org/studymeth/nlts2_design_timeline.pdf.

The chapter identifies the independent and dependent variables used to answer the research question. Questions related to each of the Expanded Core Curriculum areas (ECC) and quality of life (QOL) outcomes domains are identified and grouped accordingly.

The chapter ends with a description of the data analysis techniques that were employed. The process of exploratory factor analysis and follow-up reliability analysis is described. MANOVAs were used to answer research question 1; multiple regression models were used to answer research question 2; and hierarchical regression models were used to answer research question 3.

Sample

General Information

The sample used for the study was comprised of students who are visually impaired as identified by the Individuals with Disabilities Education Act (2004) and included in the National Longitudinal Transition Study 2. The NLTS2, funded by the U.S. Department of Education, sampled a stratified, cluster sample of students with disabilities who were receiving special education services, beginning in the 2000-2001 school year and ending in the 2008-2009 school year. To be included in the sample students must have been between the ages of 13 to 16 or in at least grade 7 by December 1, 2000. The participants in the NLTS2 study were randomly chosen from a stratified sample of local education agencies (LEA) and all participating state-supported special education schools. The LEAs were stratified on the aspects of geographic region, district enrollment and district and community wealth. Approximately equal numbers ($n = 1,250$) were in the sample frame, for each of the 12 federally defined disability categories. The sample frames in the extremely low-incidence categories of autism, traumatic brain injury and deafblindness did not have a size of 1,250 because of their relatively low prevalence and the extremely large number of LEAs required to be sampled to attain a sampling pool of 1,250. It was projected those three disability categories would have sample frames of

approximately 1,012, 559, and 122, respectively. The sample sizes were weighted to allow the sample to be nationally representative of each disability group and of students with disabilities in general (SRI International, 2000c).

Local Education Agency Sampling

The LEA sampling universe was obtained from Quality Education Data, a commercial source of school district information. The database for the school year 1998-1999 was winnowed for reasons such as blank or duplicate records. Additionally, “all nonoperating LEAs, supervisory unions, vocational-technical districts, and relevant public agencies were eliminated, . . . as were all districts that did not serve any grade in the grade 7 through grade 12 range” (SRI International, 2000c, p. 8). These actions resulted in a LEA universe of 12,435 LEAs with at least one student receiving special education services in grades 7 – 12 (SRI International, 2000c).

As mentioned previously, the LEA universe was stratified based on the three variables of district size, geographic location, and district/community wealth. The variables were selected on “conceptual soundness and the likelihood of providing a gain in precision over simple random sampling” (SRI International, 2000c, p. 8). There were four reasons for the stratification. First, it allowed for a more precise estimation as the between strata differences were eliminated. Second, the stratification allowed for fair representation of low number types of districts, such as urban districts. Third, it allowed for comparisons with other research such as the original National Longitudinal Transition Study and the Special Education Elementary Longitudinal Study. Fourth, the stratification allowed the NLTS2 to be applicable in differentiating policy effects by region or district size (SRI International, 2000c).

Stratification Levels

The LEA universe was stratified into four geographic regions, identical to those of the Department of Commerce, the Bureau of Economic Analysis, and the National Assessment of Educational Progress. Those regions and percentages of students from those regions are: Northeast 19%, Southeast 24.6%, Central 23.6%, and West/Southwest 32.8%. The variable of district size, based on enrollment data in grades 7 to 12 obtained from Quality Education Data, was divided into 4 levels with an approximately equal percentage of students. The levels and number of students are: Very large > 14,931, Large 4,661 – 14,930, Medium 1,568 – 4,660, and Small 11 – 1,567. The variable of district wealth was stratified using the Orshansky index. The authors reported it is a well-accepted index to use for this variable as it measures the percentage of the student population living below the federal poverty level. The percentage of students in each level was approximately equal. The districts were stratified into four district/community wealth levels based on the following percentages: High 0 – 13%, Medium 14 – 24%, Low 25 – 43%, and Very low > 43% (SRI International, 2000c).

Final LEA Sample

The stratification process described above resulted in the placement of the entire universe of LEAs on a 64-cell grid. An SAS computer program was used by SRI International to select eligible LEAs from the database of Quality Education Data, sort the LEAs by stratification level and variable, and then randomly select individual LEAs until a sample size of 2,205 was reached. Based on experience with the original National Longitudinal Transition Study and the recently completed Special Education Elementary Study, expectations were that a sample size of 2,205 LEAs would be necessary to have a

sufficient number of LEAs actually participating. The number of LEAs (and as many state-supported schools as possible) needed to participate in the NLTS2 study to ensure a sufficient student sample of 497 LEAs, based on district enrollment and estimated sampling fractions for each disability category (SRI International, 2000c).

LEA Sample Representativeness

The LEA sample was weighted as “there was an unequal probability of being selected into the sample” (SRI International, 2000c, p. 17). The weighting assured that the student sample would be nationally representative of each of the 12 disability categories and the overall population of students receiving special education services (SRI International, 2000c).

To ensure the sample accurately reflected the universe of LEAs, the sample and universe were compared on the three stratification variables of geographic region, district size and district/community wealth. It was found that “the weighted LEA sample closely resembles the LEA universe with respect to those variables” (SRI International, 2000c, p. 14). Additionally, a comparison of the LEA sample and universe on the relevant, nonstratified variables of the district’s metropolitan status and proportion of minority students was conducted to determine the goodness of fit. Comparing the percentage of LEAs in the universe and sample on the variables of metropolitan status and proportion of minority students, in conjunction with the fit of the stratified variables, it was determined that the sample and universe were a good match (SRI International, 2000c).

Student Sampling

SRI contacted school districts in the spring of 2000 to determine if they wished to participate in the NLTS2 study. In the fall of the 2000-2001, the districts that indicated a

wish to participate were asked for a roster of students between the ages of 13 and 16 by December 1, 2000, receiving special education services, the disability category of those students, and the students' birth date (SRI International, 2000c).

To yield a total sample of students of 12,943, a fraction of each disability category at each age level to be sampled from each participating size stratified district was estimated. The estimates of the fraction for students who were visually impaired for ages 13 – 15 stratified by LEA size was: Very large districts 50%, large districts 59%, medium sized districts 100%, and small districts 100%. The estimates for students who were visually impaired for age 16 was: Very large districts 75%, large districts 100%, medium sized districts 100%, and small districts 100%. Additionally, it was estimated 100% of students who were visually impaired from special schools ages 13 – 16 would be sampled. The student sample weights were defined as the number of students in the universe represented by the number of students in the sample. For students who were visually impaired ages 13 - 15 those weights, by LEA size stratum, were expected to be: Very large districts 8.2, large districts 9.0, medium sized districts 17, and small districts 50. For students who were visually impaired and 16 the weights, by LEA size stratum, were expected to be: Very large districts 5.5, large districts 6.0, medium sized districts 17, and small districts 50. The weight for students who were visually impaired and in specialized schools was estimated to be 3.7. The fractions and weights for students age 16 were weighted differently due to an oversampling of students of that age in order to obtain an adequate number of students who would be 24 years old or older at the end of the study. Additionally, weights were used so that the sample accurately reflected the child count conducted by the federal government for the 1998-1999 school year. A yearly

attrition rate of 8% was assumed, based on the original National Longitudinal Transition Study (SRI International, 2000c). The final weighted sample size was 4,342.

The final unweighted sample size used in this study was 133. The sample included all students who were identified as having a vision impairment as their primary disability on the 2000-2001 program survey instrument and who responded or had a parent or legal guardian respond to the parent/youth interview in wave 3 of the study, years 2004 - 2005. In addition, the participant needed to be out of school in the 2004 – 2005 school year to be included as a participant.

Instruments

There were eight instruments used to collect information in the NLTS2 on the three broad categories of school data, direct assessment data, and parent and youth information. Some instruments, such as the school characteristics survey, were employed once. Others, such as the parent/youth interview, were utilized in multiple waves. Please refer to Table 4 for a listing of data collection instruments and the waves in which they have been or will be used. The following paragraphs will discuss individual instruments in greater detail (SRI International, 2000a).

Reliability and Validity

There is no mention of reliability or validity based on scores from the instruments in the documentation supplied by SRI. Many of the instruments, for example the direct assessment instruments, contain items from tests, instruments, or national surveys which as a whole have very well established reliability and validity (SRI International, 2000a, 2000b).

All of the instruments were pretested to ensure they functioned accordingly and to address any unforeseen problems. In accordance with the federal Office of Management and Budget, the instruments could not be pretested on more than nine participants. The pretest examined timing of the instruments, comprehension of directions and format, and logic, flow, and skip patterns. Finally, each item of each instrument was analyzed to determine the credibility of responses, the existence of variation in responses, and the appropriateness to the student and setting for which the instruments were intended (SRI International, 2000a).

Parent Telephone Interview

The NLTS2 study assumed parents were the best reporters of some information relevant to the study. This included such topics as receipt of services. Additionally, only parents can be reporters of other types of information related to variables of interest. This included factors such as household characteristics, socioeconomic status, and parental expectations of what the future holds for their child (SRI International, 2000a).

The parent interview was or will be conducted with all parents in years 1, 3, and 9 of the study. Parent interviews were also conducted in years 5 and 7 of the study, but which parents were interviewed in years 5 and 7 was not yet determined at the time the data collection plan was developed. If there were questions that only parents could answer, all parents were interviewed in all scheduled years. If, however, it was not deemed necessary to collect information from all parents, the parents who had children in school, who had children younger than 18, or who had children who were unable to answer the questions themselves, were interviewed (SRI International, 2000a).

Due to the large sample size and limited resources available to conduct the NLTS2, the parent interviews were conducted by telephone. A computer-assisted telephone interview (CATI) with sophisticated skip logic was utilized to ensure only appropriate questions were asked of parents. A repetition of most questions in the parent survey occurred in the following waves. The exceptions were questions that did not change over time, such as birthdate. To minimize nonresponse bias for families without telephones, a simplified version of the survey was mailed to appropriate households. It was expected to take 40 minutes to complete the survey, and researchers projected at least a 70% response rate (SRI International, 2000a).

Youth Telephone Interview

The NLTS2 assumes that like parents, teens and young adults with disabilities have a unique perspective and can supply distinctive information relevant to the study not available through any other source. This information includes information on topics such as life experiences and feelings. As with the parent interview, youth interviews were conducted by telephone, using the CATI process. Youth were interviewed in year 3 of the NLTS2 if parents indicated their child had the ability to answer questions over the phone. Youth interviews were or will be conducted in years 5, 7, and 9. Questionnaires were mailed to youth who were hearing impaired. The average length of the youth telephone interview was projected to be 35 minutes with an expected response rate of 70% (SRI International, 2000a).

Direct Student Assessment

The NLTS2 study assumes academic performance is a predictor of postschool achievement and the information gained through the assessment process about students

with disabilities “serve[d] as important explanatory factors in understanding their later accomplishments” (SRI International, 2000b, p. 3). Due to consent issues and the amount of time necessary to conduct the parent interview in year 1, the direct assessment was conducted beginning in year 2 of the study. Additionally, as the primary reason for the assessments was one of a predictor, a narrowing of the age range when students completed the assessment to 16 through 18 years old resulted. The age of administration requirement necessitated two assessment groups, as some students would not yet be 16 by year 2 of the study. Thus, the assessment of the second group of students occurred in year 4 of the study (SRI International, 2000b).

The development of content of the assessment used with the participants in the NLTS2 was a derivative from the Reading, Math and Aptitude portions of the Woodcock Johnson Research Edition 3 (WJR3). Five subtests (Letter-Word Identification, Passage Comprehension, Applied Problems, Calculation, and the Composite Measure of Verbal and Visual Ability) were chosen as they represented the core academic areas, and they were the same group of subtests that were used in the SEELS study. The WJR3 was chosen as it is a widely used assessment tool, has been used extensively in the area of special education, and has a recent norm sample (SRI International, 2000b).

SRI recognized WJR3 would not be appropriate for some participants in the NLTS2, primarily those with significant cognitive impairments. As such, administration of alternate assessments appropriate to student skills occurred. The alternate assessments determined to be of most use were the Scale of Independent Behavior-Revised (SIBR), an American Sign Language assessment for deaf students, and the Texas School for the Blind Teacher Checklist for Orientation and Mobility for students who were visually

impaired (SRI International, 2000b). The direct assessment was expected to take 45 minutes and have a response rate of 75% (SRI International, 2000a).

Student Interview

A student interview was completed with each student upon the completion of the direct student assessment. The purpose of the interview was twofold. First, the youth interviewed provided the best information in regard to their feelings and aspirations. Second, the interview allowed participants to become familiar with the NLTS2, which could lead to a higher response rate for the telephone interviews in the years following the in-person interview. The interview was expected to take 10 to 15 minutes and have a response rate of 75% (SRI International, 2000a).

Teacher Survey

The NLTS2 assumed the regular classroom experience, behavior, and performance are all important in the lives of students who are disabled. To that end, gathering of information from the first academic teacher of the day for each student in school for years 2 and 4 of the NLTS2 occurred. The first academic teachers of the day were chosen to limit bias, as well as help ensure the survey covered a broad range of academic subjects. Information gathered included: instructional techniques and curriculum used by the teacher, the teacher's training in general education and special education, the teacher's perceived confidence, the student's academic performance and behavior, and the accommodations and modifications used by or provided to the student. The response rate was expected to be 75% (SRI International, 2000a).

School Program Survey

A special education teacher assigned by the school principal completed this survey in years 2 and 4 of the NLTS2. The intended use of this survey was to identify the student's accommodations, supports and related services; content of IEP goals; transition planning; overall school program and performance (e.g., achievement test scores); and vocational and other education experiences. This survey also ... include[d] questions about the special education teacher's experience and background, because s/he may be providing a range of services for the special education student (SRI International, 2000a, p. 3-6).

A response rate of 75% was projected (SRI International, 2000a).

School Characteristics Survey

The principal of the school students in the sample attended completed this survey in year 2 of the NLTS2. Information gathered included general information about the school and school district, enrollment, demographics of the school, and availability of specialized services. A response rate of 75% was expected (SRI International, 2000a).

Transcript

The transcripts were the lead source of information regarding each student's attendance, course taking, and grades. Transcripts were requested for all students in year 2, and for students still in school or who had left school since the last transcript request in years 4 – 8 of the NLTS2. The school was asked to identify which classes were special education classes, and which classes consist of work study or work experience. A response rate of 75% was expected (SRI International, 2000a).

Variables

Independent or Predictor Variables

Variables related to the ECC were drawn from the various data collection instruments. A gathering of variables from the parent interviews, teacher survey, and program survey covered all areas of the ECC with the exception of sensory efficiency skills. Sensory efficiency skills were not included as a separate category as many of the skills contained in this ECC area were captured as part of another ECC area. For example, the use of braille was captured as part of Academic Compensatory, and cane use was captured as part of Orientation and Mobility. Additionally, questions D4 and D7 from the program survey used to gather independent variable data for research question one did not contain a variable related to that ECC area. Only parent interview variables from youth still in school were used. Refer to Table 5 for a listing of the ECC areas, data collection instruments, and specific instrument question numbers used to gather information related to individual ECC areas. See Appendix A for a list of specific questions used to gather information in the various ECC areas.

Dependent or Response Variables

Variables related to QOL were drawn from the parent and youth interviews. Only interviews from youth or parents of youth out of school were used as outcomes as they were the area of interest. Refer to Table 6 for a list of question numbers by QOL area, and see Appendix B for a list of specific questions used to gather information in the various QOL areas.

Table 5

ECC Area and Source of Independent Variable

ECC Skill Area	NLTS2 Instrument and Source of Variable		
	Parent	Teacher	Program
Social Interaction	D10(o),11(o); F1D(o), 8(o), 9(d); G1(o), 2d(o)	C1a(o),c(o); C2a,c,d(o); C6b,d(o)	D4(d); E6f(o)
Assistive Technology	B3D(d); H1A(d)	B8(d)	D7(d)
Career Education	H1A(d); I1A(d)		C13(o), 14(d); D4(d); E6b(o)
Orientation and Mobility	B3D(d); H1A(d)		B6 a-j(o); D7(d)
Recreation and Leisure	F1C2, 3(d); D(o), 2(d), 3(d), 4(d), 7(d), 8(o), 9(d), 10(o), 12(c)		
Independent Living	F13(d), 14(d); G3(o), 4(o), 5(o)		D4(d), 9(d),16(o); E6d(o)
Self-determination Academic Compensatory	E2B(d),3A(o), 3B(o) B3Da-d(d), f(d), g(d); H1A(d)	B8(d)	D3(d),4(d); E6,9(o) A3(d); D3(d),7(d)

Note. The information in the parent, teacher, and program columns relates to specific questions used in the NLTS2 wave 1 parent, teacher, and program survey data collection instruments. An “(o)” indicates an ordinal variable, a “(c)” indicates a continuous variable, and a “(d)” indicates a dichotomous variable.

Table 6

QOL Outcome and Source of Dependent Variable

QOL Outcome Area	NLTS2 Instrument and Source of Variable	
	Parent Survey	Youth Survey
Physical and mental health	B7a(o), B7b(d)	Q1(o), 3(o), 4a(d)
Food, clothing and lodging	G3a(o); M7b(d), d(d)	W3b(d), 4b(d)
Financial security	H13b(d); J14a(d), b(d); M9a(d), b(d), c(o), d(d), e(o), f(o)	P16(d); W6a(d), b(d), c(o), d(d), e(o), f(o)
Safety from harm		V5(d)
Mobility and community access	G3a(o); M10(o)	W7(o)
Vocation, career and employment	L6a(d),b,c,d(c),e(c); L7a(d),b(c),c(c),d(d); L8b(c),c(d),e(c); L8f1(c),2(c)	T6a(d),b(c),c(c),d(c),e(c); T7a(d),b(c),c(c),d(c); T8b(c),c(d),e(c); T8f1(c),2(c)
Leisure and recreation	J2(d),12(c)	P4(c),6(d)
Personal relationships and social networks	G1(o); J6(o),7(d),8(o),10(o); M1(d)	P10(o),12(d),13b(o); W1a(d)
Educational attainment	D2e(d),4a,b(d); K5a-c(d); K6m2(d),n(d); K7j2(d),l(d); K8k(d),l(d)	S1a(d); S2a-c(d); S3a(d),q(d),r(d); S4a(d),o(d),q(d); S5a(d),p(d),q(d)
Spiritual fulfillment	J3a(d)	P7a(d)
Citizenship	J16(d)	U9(d)
Social responsibility	J15a-d(d)	U8a-d(d)
Satisfaction		V2a-e(o)
General well-being		V3a-h(o)

Note. The information in the parent and youth columns relates to specific questions used in the NLTS2 wave 2 parent/youth survey instruments. An “(o)” indicates an ordinal variable, a “(c)” indicates a continuous variable, a “(d)” indicates a dichotomous variable.

Information being treated as dependent variables was gathered from either parents *or* youth, not both. At the end of the NLTS2 wave 2 and beyond parent survey, interviewers asked parents if their child would be capable of completing an interview. If parents indicated their child would be capable of completing an interview, the youth did so. If parents indicated their child would not be capable of completing an interview, the parents completed the youth portion of the interview on behalf of their child (SRI International, 2000a).

Preliminary Analysis

Determination of the use of the appropriate statistical analysis was based on each individual research question and the type of supporting data collected through the NLTS2. SPSS version 15, SAS 9.1, and AM 0.06 were used to answer each research question as appropriate. A familywise alpha of .05 was maintained for each research question through the use of Bonferroni adjustments. Participant data were linked across multiple instruments and waves through the use of the student ID variable. As the data came from a stratified, cluster sample, the complex sampling module was used in SPSS. AM is capable of statistically analyzing complex, stratified samples. Additionally, the weights supplied by SRI International as part of the dataset were used in all statistical analysis.

Sample Characteristics

To be included in the sample, an NLTS2 participant needed to have a primary disability label of visual impairment/blindness as identified by the student's school program survey in the school year 2001 – 2002 and responded or had a parent/legal guardian respond to the parent/youth survey conducted in the 2004 – 2005 school year. In

addition, participants needed to be identified as no longer in school when the 2004 – 2005 parent/youth survey was conducted. The weighted sample size, using the weights provided by SRI International, of this group of students is 4,342. The gender breakdown of the sample is 31.7% male, 65.3% female, and 3% missing or not responding. See Tables 7 – 11 for other basic characteristics such as; age, time out of school, how the participant left school, activities youth engaged in, and ethnicity of the sample. All information reported is from the final sample of participants of this study and was gathered from the 2004 – 2005 parent / youth interview.

Table 7

How Participants Left School

Leaving Status	Frequency	Percentage
Graduated	4,097	94.4
Left voluntarily / dropped out	71	1.6
Tested to get diploma or received certificate	24	0.5
Aged out / older than age limit	5	0.1
Missing data	146	3.4
Total	4,342	100.0

Table 8

Age Distribution of Participants

Age	Frequency	Percentage
17	17	0.4
18	199	4.6
19	975	22.4
20	1,549	35.7
21	1,602	36.9
Total	4,342	100.0

Table 9

Ethnicity Distribution of Participants

Ethnic Group	Frequency	Percentage
White	2,921	67.3
African-American	955	22.0
Hispanic	226	5.2
Asian / Pacific Islander	206	4.7
Multi / Other	34	0.8
Total	4,342	100.0

Table 10

Time Out of School of Participants

Number of years out	Frequency	Percentage
Less than 2	904	20.8
2 or more	3,341	76.9
No response	97	2.2
Total	4,342	100.0

Table 11

Ways in Which Participant Have Been Engaged Recently

How Engaged	Frequency	Percentage
Not engaged	287	6.6
Employment only	497	11.4
Postsecondary only	439	10.1
Job training only	23	0.5
Volunteer only	28	0.6
Employment and postsecondary only	742	17.1
Employment and job training only	25	0.6
Postsecondary and job training only	75	1.7
Volunteer and employment only	46	1.1
Volunteer and postsecondary only	90	2.1
Volunteer and job training only	45	1.0
Employment, postsecondary, and job training	137	3.2
Volunteer, employment, and job training	16	0.4
Volunteer, employment, and postsecondary	1,180	27.2
Volunteer, postsecondary, and job training	239	5.5
Volunteer, employment, postsecondary, and job training	473	10.9
Total	4,342	100.0

Exploratory Factor Analysis

Given the large number of variables of interest, an exploratory factor analysis was conducted as a data reduction method. An exploratory factor analysis (EFA) is a process of examining variables and determining if there is an underlying factor or latent structure

by which a grouping or groupings of variables can occur without losing relevant information (Hill & Lewicki, 2007). Variables, related to the ECC and QOL areas based on their face validity, from the NLTS2 were grouped and examined through an EFA process. To determine the number of possible factors to be extracted from a given set of variables, scree plots were examined, the number of factors with eigenvalues over 1 were considered, and a parallel analysis using the raw NLTS2 data was conducted. The initial number of factors was determined by the convergence of the three methods. If the three methods did not converge, but two did, that was the initial number of factors used. If each method gave a different initial number of factors to consider, the number given by the parallel analysis was used. Once the number of factors was determined, the EFA was conducted with a promax rotation.

Next, factor loadings from the resulting pattern matrix were examined. Each initial factor loading structure had a cutoff value of .3. This often resulted in a single variable loading on multiple factors. In instances where this occurred, the cutoff value was raised to .4 in order to minimize loss of information through the deletion of multiple loading variables. Variables loading on more than one factor were considered to be too general to be of use, were dropped, and the EFA was rerun. Additionally, if any EFA contained factors with only one variable, the EFA was rerun with one less factor. Finally, if a variable had a negative loading the variable was recoded. Recoding of a variable was often the case when one question was negatively worded while the rest of the questions loading on that factor were positively worded. An EFA was considered final when all variables loaded on only one factor, and all factors had at least a two variable loading.

Reliability

After the final EFA, each factor was examined for its reliability. The reliability estimates were obtained by Cronbach's alpha. To be included in further analysis, each factor needed to have a reliability of .7 or greater. Factors and the variables that comprised factors with an alpha of lower than .7 were dropped from consideration in further analysis. An exception to the cutoff value occurred in the ECC area of Self-Determination and the QOL area of Financial Security. The EFA determined there were two factors for each ECC and QOL area, respectively. However, no factor had an alpha greater than .7. However, some factors had a reliability estimate greater than .6. Factors for these two areas with a reliability greater than .6 were kept for use in additional analysis. The information gained by keeping the factors for use in future analysis was judged to outweigh the low reliability estimate associated with those factors.

Of the EFAs that were conducted, only the ECC area of Recreation and Leisure had no factors that met or were even close to meeting the reliability threshold. As such, the ECC area of Recreation and Leisure was not included in any further analysis.

When examining reliability, SPSS 15 allows item analysis based on the option to determine reliability based on the removal of a single variable from the analysis. This option was included in each reliability examination. Removal of variables from the factor occurred if the reliability analysis forecast the removal of the variable would cause an increase in the reliability of the overall factor by more than .05. If removal of a variable occurred in order to increase the reliability, the EFA was rerun to ensure the remaining variables did not load on multiple factors and each factor had two or more variables.

Composite Variables

The variables from each factor having reliability estimates of .7 or greater (.6 for the ECC area of Self-Determination and QOL area of Financial Security) were summed. This resulted in the formation of new, composite variables to be used in all further analysis. Many factors contained variables whose answers were on different scales. For instance, some factors had variables with yes/no answers and variables with a scaled Likert response. The variables in such factors were standardized by computing z-scores and then summed.

Missing Values

Many of the composite variables had missing values. Given the large number of variables used to answer the research questions, listwise omission of cases with missing values would render instances in which completion of the statistical analysis would not be possible, or the sample size would be reduced to such a level as to make the results meaningless. To remedy the situation, missing values were imputed into the composite variables or any other variables used in any statistical analysis. The SPSS Missing Values Analysis module was used to calculate values for those that were missing. The expectation-maximization (EM) method was used as it is the only appropriate method for use when values are missing at random (MAR) versus values that are missing completely at random (MCAR) which allows other processes to be used (Hair, Black, Babin, Anderson, & Tatham, 2006). MAR assumes there is some type of pattern to the data that are missing (Hair et al.). It was assumed that the missing values were MAR given the large number of participants and variables. The EM method is an iterative process and SPSS was allowed to run as many iterations as necessary to complete the process.

Research Question One

To best answer research question one,

- Q1 Is there a difference in quality of life outcomes for students who are visually impaired and who received instruction in the Expanded Core Curriculum areas versus quality of life outcomes for students who are visually impaired and who did not receive instruction in the Expanded Core Curriculum areas?

MANOVAs were used to determine if there was a difference in the scores of quality of life indicators. MANOVA was chosen as the test statistic as there were multiple dependent variables of interest, to simultaneously compare two groups (those who received instruction and those who did not) across multiple dependent variables, and to help control for type I error. There were seven independent variables and numerous dependent variables, thus a very large number of comparable univariate tests would have needed to be conducted, increasing the chances of a type I error.

While the SPSS complex samples module can perform some statistical procedures using strata, cluster, and instrument weights, the SPSS complex samples module cannot perform multivariate analysis such as MANOVA. After reviewing the websites of manufacturers of other specialized statistical software developed just for stratified, cluster samples, it was unclear whether those software packages could perform a MANOVA. As such, the MANOVAs were conducted with the standard version of SPSS 15. Not being able to use the complex samples module in SPSS potentially impacted the standard errors and tended to artificially inflate the test statistics, increasing the possibility of committing a type I error (Hahs-Vaughn, 2005). In the absence of specialized software to account for the sampling, one alternative is to make the significance level more stringent (J.

Blackorby, SRI International, personal communication). As such, the significance level used was .0001.

Independent Variables

Separate MANOVAs were conducted for each of the seven ECC areas on which data from the program survey had been gathered (sensory efficiency and recreation and leisure are not included). The independent variable for each of the MANOVAs for the areas of social interaction, career education, independent living, and self-determination used question D4, a dichotomous variable, from the 2001-2002 program survey. Question D4 asks the respondent to indicate if these areas were Individualized Education Program (IEP) goal areas, thus implying instruction took place, for each participant. The independent variable for each of the MANOVAs areas of assistive technology, orientation and mobility, and compensatory access skills used question D7, a dichotomous variable, from the 2001-2002 program survey. Question D7 asks the respondent to indicate if services have been provided, thus implying instruction, to the student in that school year. Table 12 lists the independent variables, the seven ECC areas, used in the analysis along with the corresponding variable name and label.

Dependent Variables

The parent or youth survey data for out of school youth from the 2004-2005 school year was the source of the data used for the dependent variables. The parent or youth survey was the most appropriate instrument as it contained the most recent data and it captured outcome information related to many of Halpern's (1993) QOL domains. The factors identified in the exploratory factor analysis were the dependent variables. For ease in interpretation, the quality of life areas were grouped by the three larger domains of

Table 12

Independent Variables Used to Answer Research Question One

ECC Area	Variable Name	Variable Label
Career Education	npr1D4_10	Primary goals for student: Develop vocational skills
Social Interaction	npr1D4_03	Primary goals for student: Build social skills
Independent Living	npr1D4_05	Primary goals for student: Increase functional of life skills
Self-Determination	npr1D4_07	Primary goals for student: Enhance self-advocacy skills
Assistive Technology	npr1D7b	Assistive technology services provided by school
Orientation and Mobility	npr1D7i	Mobility training services provided by school
Academic Compensatory	npr1D7o	Vision services/Braille instruction services provided by school

Physical and Material Well Being, Performance of Adult Roles, and Personal Fulfillment as identified by Halpern, rather than examining quality of life with all the composite and other variables forming one large quality of life aggregate. The dependent variable names and labels for each QOL domain are as listed in Table 13. The composite variables, developed from the exploratory factor analysis, are in italics.

Assumptions

For each MANOVA, descriptive statistics were generated and assumptions were tested. MANOVA assumptions are independence of observations, random sampling, multivariate normality, and homogeneity of covariance matrices. As the sample was a stratified, cluster sample the assumptions of independence and random

Table 13

Dependent Variables Used to Answer Research Question One

QOL Domain Area	Variable Name	Variable Label
Physical and Material Well Being	np3G3a_g	How well youth can buy own clothes at a store
	np3W4b_M7d	Youth currently receives food stamps
	<i>QOL_Comp_Var_FS2</i>	<i>Financial Security 2: Source of Money</i>
	<i>QOL_Comp_Var_FS1</i>	<i>Financial Security 1: How Uses Money</i>
	np3Q1_B7a	General health of youth
	np3Q3	How often health or emotional problem caused the youth to miss a social activity in the past month
	np3Q4a_B7b	Youth currently takes a prescription medication related to a disability
Performance of Adult Roles	np3U9_J16	Youth is registered to vote
	np3S3a_D4a1	Youth has taken any classes from a 2-yr/community college since leaving high school
	np3S4a_D4a2	Youth took classes from a vocational or technical school since leaving high school
	np3S5a_D4a3	Youth has taken classes at a 4-year college/university since high school
	<i>QOL_Comp_Var_MCA</i>	<i>Mobility and Community Access</i>
	<i>QOL_Comp_Var_RL</i>	<i>Recreation and Leisure</i>
	<i>QOL_Comp_Var_PRSN</i>	<i>Personal Relationships and Social Networks</i>
	<i>QOL_Comp_Var_SR</i>	<i>Social Responsibility</i>
	np3P7a_J3a_02	Participated in religious groups
	<i>QOL_Comp_Var_JiC</i>	<i>Jobs in Community</i>
Personal Fulfillment	<i>QOL_Comp_Var_S2PF</i>	<i>Satisfaction 2: Positive Feelings</i>
	<i>QOL_Comp_Var_WB1</i>	<i>Well Being 1: Can Take Care of Oneself</i>
	<i>QOL_Comp_Var_WB2</i>	<i>Well Being 2: Feels Positive About Self</i>

sampling were violated. The assumption of multivariate normality was checked by examining the normality of each dependent variable. The homogeneity of covariance assumption was determined through the use of a Levene and Box M test. In order to meet this assumption neither test can be significant. As both the Levene and Box M tests are highly sensitive to small violations, an alpha of .001 was used.

Significance and Effect Size

To determine if the omnibus MANOVA was statistically significant an adjusted alpha of .0001 was used. Wilks's Lambda was used as the test statistic. To help interpret the results, effect sizes were reported. The effect size measure supplied by SPSS is partial eta squared. Sink and Stroh (2006) list the following cutoff values for partial eta squared; $\geq .01$ = small, $\geq .06$ = medium, and $\geq .14$ = large.

Discriminant Analysis

In instances when the MANOVA was significant, post hoc analysis using descriptive discriminant analysis was completed. Results of the post hoc analysis were used to determine which of the QOL areas were most responsible for differences between those who did or did not have training in a particular ECC area.

Research Question Two

Research question two stated:

Q2 Which Expanded Core Curriculum area or combination of areas best predicts postschool quality of life?

and was answered through the use of an all subsets multiple regression. This type of regression allows inspection of multiple models for each number of predictors entered into the model. R squared was the selection criteria used to judge models both for number of predictors and combinations of predictors. R squared was chosen as it explains the

amount of variance in the outcome variable attributable to the predictors in the model. Since the sampling design of the NLTS2 does not affect R squared, SAS 9.1 was an appropriate software package to use.

Variables

Composite outcome variables were developed to represent each of Halpern's (1993) QOL domains. Composite outcome variables for Halpern's three domains were developed from the variables listed on Table 6 and from the exploratory factor analysis. As many of the variables and composite variables from the factor analysis were measured on different scales, each variable or factor analysis composite variable was standardized by converting it to a z-score. The z-scores were then summed for each outcome area to form three new variables. These three new outcome variables, labeled the same as Halpern's domain labels, are Physical and Material Well Being, Performance of Adult Roles, and Personal Fulfillment.

The predictor variables were developed from the exploratory factor and reliability analysis conducted with variables representing the ECC areas found in the various surveys administered in wave 1 of the NLTS2. There were 13 predictors representing the seven ECC areas of Academic Compensatory, Orientation and Mobility, Assistive Technology, Independent Living, Social Interaction, and Self-determination.

Assumptions

An assumption of multiple regression is linearity in the relationship between the predictors and the outcome variables. This assumption was tested through an examination of the standardized predicted versus residual scatterplot. A scatterplot with a random pattern of dots indicates the assumption was met. A second assumption of multiple

regression is homoscedasticity. This assumption was assessed by examining the standardized predicted versus residual scatterplot. A random placement of dots on the scatterplots indicates the assumption has been met. A third assumption of multiple regression is normally distributed errors. This assumption was assessed through observation of the normal probability plot. An approximately straight line of 45 degrees indicates the assumption has been met. A fourth assumption of multiple regression is independence of observations. As this assumption was violated by the sample design of the NLTS2, the AM software package was used to address the independence assumption. Strata, cluster and instrument weights provided by SRI International were used for each model tested. A fifth assumption of multiple regression is no perfect multicollinearity, meaning the predictor variables should not correlate highly. This assumption was tested through examining the variance inflation factor (VIF) for each predictor. A common cutoff for this value is 10, but as it is possible the sampling design influenced this value (D. Mundfrom, personal communication), a cutoff of 5 was used.

Model selection

Initial model selection was based on examining R squared for a full model with 13 predictors. Examination of models began at the number of predictors that explained 5% less of the variance in the outcome variable than the full model.

Once the number of predictors to examine was selected from the SAS output, the model with the highest R squared for that number of predictors was run in the AM statistical software package. The AM software is designed to handle complex samples, such as the NLTS2, as such it was used for significance testing of the model and the predictors that made up each model. If the model and predictors were found to be

significant, the model was then run again in SPSS to get information such as normal probability plots, VIF, and scatterplots, not available in the AM software package, to test assumptions.

Each model was examined for outliers and influential cases. Cases were considered outliers if they were plus or minus 3 standard deviations and influential if they had a Cook's D greater than 1.

Research Question Three

Research question three stated:

Q3 After controlling for instruction in the Expanded Core Curriculum, is the relationship between postschool quality of life and age when a participant started to receive services for his or her vision impairment statistically significant?

and was examined through the use of a hierarchical regression model. The models developed from answering research question two were used, but the age when the participants started to receive specialized services was entered into the regression models after instruction in the ECC had been controlled for. The age when specialized services began was based on the answers given in response to question B2c from the 2000-2001 parent survey. The question read: About how old was [he/she] when [he/she] started getting special services from a professional for this difficulty?

The same procedures used to examine assumptions, check for multicollinearity, and examine outliers used in question two were used to answer research question three. As with research question two a Bonferroni adjustment was made, to a p-value of .01. The statistic used to determine if age of participant when s/he started to receive services explains a significant *additional* amount of the variance of the outcome variable is a change in R squared. A regression was run for the ECC areas, age when services began

was added to the model, and the regression was run again, resulting in an analysis for each model. Age was determined to be significant if the change in the F statistic was found to be significant. However, due to the sampling design of the NLTS2 the computation of the F statistic by SPSS is incorrect. The AM software is unable to complete a hierarchical regression. As such, R squared was reported without and with age when services began, as R squared is not affected by sample design

Summary

This chapter described the sampling procedures used to create a sample that is nationally representative of youth with disabilities who had a primary disability category of visual impairment or blindness in the 2001 – 2002 school year. The instruments used to gather information about the sample were the program survey and the teacher survey from the 2001 – 2002 school year and the parent / youth survey from the 2004 - 2005 school year.

The general characteristics of the participants in this study were listed. The participants were; out of school as most, approximately 95%, had graduated; between the ages of 17 and 21; and engaged primarily in some combination of postsecondary attendance, work, or volunteering.

The independent and dependent variables that were used in the examining of data were identified. Questions related to seven of the ECC areas were identified as the independent variable used in research question one, and composite and other variables were identified as the dependent variables. The dependent variables were grouped by QOL domain areas. MANOVA was identified as the appropriate statistical analysis to answer research question one. Research question two used all subsets multiple regression.

The predictor variables used were those developed as part of the EFA. The outcome variables were grouped by QOL domain area and summed. This resulted in one outcome variable for each of the three QOL domains. Research question three used the same set of variables as research question two, but used a hierarchical regression. Age of the participant was the second level of the regression and was added to the model after the ECC areas.

CHAPTER IV

RESULTS

The chapter describes the results of the exploratory factor analysis used to develop composite variables from the Expanded Core Curriculum (ECC) and Quality of Life (QOL) areas. The remainder of the chapter is devoted to reporting the results of the analysis of the three research questions.

Preliminary Analysis

A description of the exploratory factor (EFA) and reliability analysis used to create the composite variables follows. The results and the names of the newly created composite variables are reported.

Factor and Reliability Analysis

Tables 14 through 28 contain the results of the EFAs, the associated Cronbach's alpha reliability for each factor, and the names of the new composite variables used to answer the three research questions.

The information in italicized type in each table indicates the variables forming a composite variable that met the reliability cutoff value of .7 or .6 for the ECC area of Self-Determination and the QOL area of Financial Security. Reliability cutoff values were lowered for those areas as they contained factors with reliability values close to .7, and it was judged that they be represented with a lower reliability than not represented at all. Tables 14 - 21 contain the results of each of the EFAs for the ECC areas. Tables 22 - 28 contain the results of each of the EFAs for the QOL areas. Only reliable factors were named.

Table 14

Exploratory Factor Analysis Pattern Matrix ECC Area: Academic Compensatory Skills

Variable name and description	Factor loadings		
	1	2	3
<i>(nts1B8_18) Support—assistance with learning strategies</i>	.908		
<i>(nts1B8_23) Aids--use of computer when not allowed for others</i>	.907		
<i>(npr1D3c_02) Learning aids on IEP/504 plan: Use of calculator</i>	.868		
<i>(npr1D3b_07) Supports and assistance on IEP/504 plan: Learning strategies/study skills</i>	.835		
<i>(nts1B8_24) Aids--computer software</i>		.835	
<i>(np1B3d_b) Youth uses a portable Braille note taker</i>		.829	
<i>(nts1B8_22) Aids--communication aids</i>		.827	
<i>(np1B3d_a) Youth uses Braille</i>		.643	
<i>(nts1B8_25) Aids--computer hardware</i>		.619	
<i>(nts1B8_21) Aids: Use of calculator when not allowed for others</i>		.522	
<i>(np1H1a_m) In past 12 months received assistive technology services</i>			.845
<i>(nts1B8_26) Aids—other</i>			.808
<i>(npr1D7o) Vision services/Braille instruction services provided by school</i>			.778
<i>(npr1D3c_03) Learning aids on IEP/504 plan: Communication aids</i>			.464
Cronbach's Alpha	.921	.810	.530

Factor 1 Composite Variable: Provision of Learning Strategies

Factor 2 Composite Variable: Braille and Technology Use

Table 15

Exploratory Factor Analysis Pattern Matrix ECC Area: Assistive Technology

Variable name and description	Factor loadings	
	1	2
<i>(np1H1a_m) In past 12 months received assistive technology services</i>	.847	
<i>(npr1D7b) Assistive technology services provided by school</i>	.806	
<i>(nts1B8_26) Aids--other</i>	.773	
<i>(np1B3d_f) Youth uses assistive technology to see or read</i>	.745	
<i>(nts1B8_20) Aids--books on tape</i>	.694	
<i>(np1B3d_b) Youth uses a portable Braille note taker</i>		.976
<i>(nts1B8_22) Aids--communication aids</i>		.968
Cronbach's Alpha	.826	.941

Factor 1 Composite Variable: Services Provided and Devices Used

Factor 2 Composite Variable: Electronic Braille Usage

Table 16

Exploratory Factor Analysis Pattern Matrix ECC Area: Career Education

Variable name and description	Factor loadings			
	1	2	3	4
<i>(npr1C14_12) Voc ed students who received: Job coach</i>	.940			
<i>(npr1D4_10) Primary goals for student: Develop voc skills</i>	.843			
<i>(npr1c13b) Percentage of day spent in school-sponsored work off campus</i>	.839			
<i>(np1H1a) Youth participated in a school sponsored work activity</i>	.759			
<i>(npr1C14_06) Vocational education students who received: Internship or apprenticeship</i>		.927		
<i>(npr1C14_07) Vocational education students who received: Tech-prep program</i>		.880		
<i>(npr1c13a) Percentage of day spent in school-sponsored work on campus</i>		.820		
<i>(npr1C14_09) Vocational education students who received: Other work experience</i>			.858	
<i>(npr1C14_10) Vocational education students who received: Job skills training</i>			.775	
<i>(np1H1a_p) In past 12 months received career counseling</i>			.705	
<i>(npr1C14_04) Vocational education students who received: Instruction in looking for jobs</i>			.651	
<i>(npr1C14_13) Vocational education students who received: None of these</i>				.818
<i>(npr1C14_02) Vocational education students who received: Career counseling</i>				.644
<i>(npr1C14_11) Vocational education students who received: Placement support</i>				.588
Cronbach's Alpha	.874	.833	.855	.533

Factor 1 Composite Variable: Worked Off Campus

Factor 2 Composite Variable: Worked On Campus

Factor 3 Composite Variable: Received Training or Counseling

Table 17

Exploratory Factor Analysis Pattern Matrix ECC Area: Independent Living Skills

Variable name and description	Factor loadings		
	1	2	3
<i>(np1G3b) How well does s/he feed him/her self completely</i>	.933		
<i>(np1G3a) How well does s/he dress him/her self completely</i>	.923		
<i>(np1G4b) How well does s/he read and understand common signs</i>		.921	
<i>(np1G4d) How well does s/he look up telephone numbers</i>		.918	
(np1F14b) Youth has a checking account			.845
(npr1E6_d) Student with transition plan: progress toward independent living goals			.584
(np1G5a) How often does s/he fix his/her own breakfast			.472
Cronbach's Alpha	.850	.836	.357

Factor 1 Composite Variable: Completes Functional Skills

Factor 2 Composite Variable: Uses Environmental Information

Table 18

Exploratory Factor Analysis Pattern Matrix ECC Area: Orientation and Mobility

Variable name and description	Factor loadings		
	1	2	3
<i>(npr1B6e) How well executes route within building w/verbal directions</i>	.933		
<i>(npr1B6f) How well executes route in another building w/directions</i>	.894		
<i>(npr1B6d) How well creates new routes between familiar places indoors</i>	.877		
<i>(npr1B6c) How well travels to other areas using rotely learned routes</i>	.694		
<i>(np1B3d_e) Youth uses mobility devices such as canes</i>	.683		
<i>(npr1B6g) How well locates unfamiliar place by numbering systems</i>	.623		
(npr1B6b) How well travels indoors using rotely learned routes		.818	
(npr1B6j) How well solicits help to orient self to campus/workplace		.801	
(npr1B6a) How well travels using sighted guide to familiar locations		.683	
(np1H1a_g) In past 12 months received orientation services			.896
(npr1D7i) Mobility training services provided by school			.804
Cronbach's Alpha	.885	.544	.655

Factor 1 Composite Variable: Independent Travel

Table 19

Exploratory Factor Analysis Pattern Matrix ECC Area: Recreation and Leisure

Variable name and description	Factor loadings	
	1	2
(np1F9) Invited to social activities in the past 12 months	.737	
(np1F12) Hours per week youth watches TV or videos	.691	
(np1F10) How often friends call youth on the phone	.686	
(np1F8) Days per week gets together w/ friends in past 12 months	.630	
(np1F4) Participated in out-of-school activities		.822
(np1F1d) How often interacts with others using email/chatrooms recode		.682
(np1F3) Participated in school activity outside of class		.644
Cronbach's Alpha	.174	.391

Table 20

Exploratory Factor Analysis Pattern Matrix ECC Area: Self-Determination

Variable name and description	Factor loadings	
	1	2
(npr1E6_g) Student with transition plan: progress toward self-advocacy	.836	
(np1E2d) Youth met w/ teachers to set post-graduation goals	.749	
(npr1D4_07) Primary goals for student: Enhance self-advocacy skills	.641	
(npr1E9) Student with transition plan: student's role in transition planning	.525	
(np1E3a) Who mostly came up with IEP goals		.827
(np1E2b) Youth went to IEP meeting for special education program		.823
Cronbach's Alpha	.621	.038

Factor 1 Composite Variable: Student Action and Self-Advocacy Goals

Table 21

Exploratory Factor Analysis Pattern Matrix ECC Area: Social Interaction

Variable name and description	Factor loadings	
	1	2
<i>(np1G2d) How good is s/he at being sensitive to others</i>	.926	
<i>(np1G1b) How often youth makes friends easily</i>	.900	
<i>(np1D10) How well youth gets along with other children</i>	.896	
<i>(np1G1d) How often youth seems self-confident</i>	.893	
<i>(np1G1f) How often youth starts conversations</i>	.831	
<i>(np1G1E_Rev) Avoids trouble situations</i>	.726	
<i>(np1D11) How well youth gets along with teachers</i>	.677	
<i>(np1G1k) How often youth speaks in an appropriate tone</i>	.609	
<i>(np1G1i) How often youth controls temper when arguing</i>	.541	
<i>(nts1C2a) How often student argues with others</i>		.880
<i>(np1G1a) How often youth joins group activities</i>		.866
<i>(nts1C1c) Student controls behavior to act appropriately</i>		.836
<i>(nts1C1a) Student gets along well with others</i>		.827
<i>(npr1E6_f) Student with transition plan: progress toward social/interpersonal goals</i>		.795
<i>(nts1C6d) How often student withdraws from social contact</i>		.672
<i>(npr1D4_03) Primary goals for student: Build social skills</i>		.471
Cronbach's Alpha	.814	.851

Factor 1 Composite Variable: Student Interaction with Others

Factor 2 Composite Variable: Behavior of Students with Social Skills Goals on IEP

Table 22

Exploratory Factor Analysis Pattern Matrix QOL Area: Financial Security

Variable name and description	Factor loadings	
	1	2
<i>(np3P16d_J14b_c) Youth has credit card in his or her own name</i>	.930	
<i>(np3P16c_J14b_b) Youth has a checking account and writes check</i>	.768	
<i>(np3P16b_J14b_a) Youth has a savings account</i>	.683	
<i>(np3H13b) Youth currently receives SSI</i>		.942
<i>(np3P16a_J14a) Youth has an allowance or other money that he/she can decide how to spend</i>		.766
Cronbach's Alpha	.689	.655

Factor 1 Composite Variable: How Uses Money
Factor 2 Composite Variable: Source of Money

Table 23

Exploratory Factor Analysis Pattern Matrix QOL Area: Personal Relationships and Social Networks

Variable name and description	Factor loadings
	1
<i>(np3P10_J6) How often youth got together with friends outside of organized activities in the past 12 months</i>	.946
<i>(np3P11_J7) Youth was invited to social activities with friends in the past 12 months</i>	.910
<i>(np3P12_J8) How often friends called youth on the phone in the past 12 months</i>	.889
<i>(np3P13b_J10) How often youth uses e-mail, instant messaging, or chat rooms</i>	.722
Cronbach's Alpha	.815

Factor 1 Composite Variable: Personal Relationships and Social Networks

Table 24

Exploratory Factor Analysis Pattern Matrix QOL Area: Recreation and Leisure

Variable name and description	Factor loadings	
	1	2
<i>(np3P14c) How often youth just hang out with friends in the past week</i>	.881	
<i>(np3P14b) How often youth did hobbies in the past week</i>	.869	
<i>(np3P13a1_J9a1_c) Youth uses a computer for accessing the internet</i>		.811
<i>(np3P13a1_J9a1_b) Youth uses a computer for playing games</i>		.784
Cronbach's Alpha	.700	.327

Factor 1 Composite Variable: Recreation and Leisure

Table 25

Exploratory Factor Analysis Pattern Matrix QOL Area: Satisfaction

Variable name and description	Factor loadings	
	1	2
<i>(np3V2e) How often youth felt lonely</i>	.872	
<i>(np3V2b) How often youth felt depressed</i>	.764	
<i>(np3V2c) How often youth felt that people disliked him/her</i>	.638	
<i>(np3V2d) How often youth felt hopeful about the future</i>		.941
<i>(np3V2a) How often youth felt that s/he enjoyed life</i>		.931
Cronbach's Alpha	.628	.859

Factor 2 Composite Variable: Positive Feelings About Life

Table 26

Exploratory Factor Analysis Pattern Matrix QOL Area: Social Responsibility

Variable name and description	Factor loadings
	1
<i>(np3U8a_J15a) Youth has been arrested any time in the past 2 years</i>	.966
<i>(np3U8b_J15b) Youth has been in jail overnight in the past 2 years</i>	.966
<i>(np3U8c_J15c) Youth has been on probation in the past 2 years</i>	.732
Cronbach's Alpha	.869

Factor 1 Composite Variable: Social Responsibility

Table 27

*Exploratory Factor Analysis Pattern Matrix QOL Area: Vocation, Career, or**Employment*

Variable name and description	Factor loadings	
	1	2
<i>(np3T8f1_L8f1_I3a) Hourly wage of employed out-of-school youth's current job</i>	.847	
<i>(np3T6e_L6e) Longest time (in months) out-of school youth has worked at a job since high school</i>	.731	
<i>(np3T6d_L6d) Number of paid jobs out-of-school youth has had since leaving high school</i>	.664	
<i>(np3T7a_L7a_I2b) Out-of-secondary school youth currently has a paid job other than work around house</i>		.910
<i>(np3T7b_L7b) Number of jobs out-of-school youth has currently</i>		.903
Cronbach's Alpha	.594	.933

Factor 2 Composite Variable: Jobs in the Community

Table 28

Exploratory Factor Analysis Pattern Matrix QOL Area: Well Being

Variable name and description	Factor loadings	
	1	2
<i>(np3V3g) You can handle most things that come your way</i>	.944	
<i>(np3V3h) You know how to get the information you need</i>	.918	
<i>(np3V3f) You feel your life is full of interesting things to do</i>	.899	
<i>(np3V3d) Can tell other people your age how you feel when they upset you or hurt your feelings</i>	.883	
<i>(np3V3e) You feel useful and important</i>	.870	
<i>(np3V3c) You can make friends easily</i>		.949
<i>(np3V3b) You are a nice person</i>		.756
<i>(np3V3a) You are proud of who you are</i>		.744
Cronbach's Alpha	.943	.754

Factor 1 Composite Variable: Can Take Care of Oneself

Factor 2 Composite Variable: Feels Positive About Self

Summary

As there were many variables in the NLTS2, an EFA was conducted as a data reduction method and to develop composite variables for use in answering the three research questions. The results of the EFAs and newly created composite variables were listed in a series of tables, with the variables that formed reliable factors indicated by italicized type.

Research Question One

Research question one stated:

- Q1 Is there a difference in quality of life outcomes for students who are visually impaired and who received instruction in the Expanded Core Curriculum areas versus quality of life outcomes for students who are visually impaired and who did not receive instruction in the Expanded Core Curriculum areas?

MANOVAs were used to determine if instruction in the ECC areas resulted in differences in quality of life outcomes. For ease in interpretation, the quality of life areas were grouped by the three larger domains of Physical and Material Well Being, Performance of Adult Roles, and Personal Fulfillment as identified by Halpern (1993) rather than examining quality of life with all the composite and other variables forming one large quality of life aggregate. The dependent variable names and labels for each QOL domain are as listed in Table 13. The composite variables, developed from the exploratory factor analysis, are in italics. Table 12 lists the independent variables, the seven ECC areas, used in the analysis along with the corresponding variable names and labels.

Results

MANOVAs were conducted with each of the seven independent variables individually found on Table 12 for each of the three QOL domain areas found on Table 13. This resulted in 21 MANOVAs. Table 29 lists the results of each MANOVA. The results should, however, be viewed with caution. Each MANOVA was significant, $p < .0001$, and all but one had a large effect size. Thus, it can be stated that instruction in the ECC areas resulted in a difference in QOL outcome measures for those who received instruction versus those who did not receive instruction in an ECC area.

Table 29

Research Question One MANOVA Results

ECC Area, Variable, and Label	Quality of Life Outcome Domain		
	Physical and Material Well Being	Performance of Adult Roles	Personal Fulfillment
Career Education, npr1D4_10, Primary goals for student: Develop vocational skills	.646 ^a (3, 4342) 338.996 ^b .354 ^c	.615 ^a (10, 4335) 271.857 ^b .385 ^c	.669 ^a (7, 4338) 716.719 ^b .331 ^c
Social Interaction, npr1D4_03, Primary goals for student: Build social skills	.625 ^a (3, 4342) 372.426 ^b .375 ^c	.553 ^a (10, 4335) 351.819 ^b .448 ^c	.618 ^a (7, 4338) 895.425 ^b .382 ^c
Independent Living, npr1D4_05, Primary goals for student: Increase functional or life skills	.674 ^a (3, 4342) 299.275 ^b .326 ^c	.485 ^a (10, 4335) 460.726 ^b .515 ^c	.656 ^a (7, 4338) 758.494 ^b .344 ^c
Self-Determination, npr1D4_07, Primary goals for student: Enhance self- advocacy skills	.673 ^a (3, 4342) 301.208 ^b .327 ^c	.747 ^a (10, 4335) 146.444 ^b .253 ^c	.839 ^a (7, 4338) 277.670 ^b .161 ^c
Assistive Technology, npr1D7b, Assistive technology services provided by school	.554 ^a (3, 4342) 499.606 ^b .446 ^c	.644 ^a (10, 4335) 239.134 ^b .356 ^c	.839 ^a (7, 4338) 277.728 ^b .161 ^c
Orientation and Mobility, npr1D7i, Mobility training services provided by school	.768 ^a (3, 4342) 187.710 ^b .232 ^c	.614 ^a (10, 4335) 272.623 ^b .386 ^c	.836 ^a (7, 4338) 283.012 ^b .164 ^c
Academic Compensatory, npr1D7o, Vision services / Braille instruction services provided by school	.580 ^a (3, 4342) 449.533 ^b .420 ^c	.504 ^a (10, 4335) 426.119 ^b .496 ^c	.961 ^a (7, 4338) 58.940 ^b .039 ^c

Note. ^a = Wilks' Lambda. ^b = F degrees of freedom and statistic. ^c = effect size of partial eta.

$p < .0001$ for each MANOVA.

However, violations of the assumptions of the MANOVA procedure occurred. As the NLTS2 is a stratified, clustered sample, the assumption of independence of observations was violated. While the SPSS complex samples module can perform some statistical procedures using strata, cluster and instrument weights, the SPSS complex samples module cannot perform multivariate analysis such as MANOVA. As such, the MANOVAs were conducted with the standard version of SPSS 15. Not being able to use the complex samples module in SPSS also impacts the standard error and tends to artificially inflate the F statistic, increasing the possibility of committing a type I error (Hahs-Vaughn, 2005). In the absence of specialized software to account for the sampling, one alternative is to make the significance level more stringent (J. Blackorby, SRI International, personal communication). As such, the significance level used was .0001.

Small effect sizes may also be an indicator of a type I error. The only MANOVA with a small effect size was the MANOVA that examined differences in the Personal Fulfillment domain, with the independent variable of Vision Services / Braille instruction services provided by school. All other effect sizes were considered large, .14 or greater, as determined by Sink and Stroh (2006) which were based on Cohen's (1988) estimates.

The multivariate normality assumption was met through examination of the normality of each dependent variable. Skewness and kurtosis values were examined for each and found to be within or very close to acceptable limits.

In addition to the independence of observations assumption, the homogeneity of covariance assumption was also violated. Both Levene's test and the Box M test were significant for each MANOVA indicating an assumption violation. However, both tests are highly sensitive, and Box's M is considered to be highly sensitive with large sample

sizes and when large numbers of dependent variables are examined. Thus, a significant finding for tests of homogeneity should be treated with caution (Field, 2005).

Discriminant Analysis

In order to better explain the differences between groups and to identify which variables were most responsible for the differences between those who did and those who did not receive training or instruction in an ECC area in the 2001 – 2002 school year, descriptive discriminant analysis (DDA) was conducted. As DDA is conducted when differences between groups are found, a DDA was conducted for each significant MANOVA. The results, grouped by ECC area and QOL outcome domain, are listed in Tables 30 - 36.

Reporting DDA results occurred for two types of values for each significant MANOVA: *F* to Remove and the Standardized Canonical Discriminant Function Coefficient. The *F* to Remove indicates the importance the variable played in distinguishing between groups, with higher values indicating a greater importance (Hill & Lewicki, 2007). As with the *F* statistic in ANOVA, this statistic can have any positive value. The numbers reported in the tables have been rounded to the nearest whole number. The absolute value of the Standardized Canonical Discriminant Function Coefficient indicates the importance of the variable in explaining the differences between groups. Higher absolute values indicate a greater importance (<http://faculty.chass.ncsu.edu/garson/PA765/index.htm>).

When interpreting the output from SPSS for DDA with these two types of statistics, one looks for a sudden decrease in the value of the statistic. The variables and

Table 30

Discriminant Analysis of Significant MANOVA Results, ECC Area Career Education

Physical and Material Well Being	Statistic	Performance of Adult Roles	Statistic	Personal Fulfillment	Statistic
Financial Security 2: Source of Money	689 ^a	Participated in religious groups	385 ^a	Well Being 1: Can Take Care of Oneself	531 ^a
Currently receives food stamps	288 ^a	Jobs in community	137 ^a	Well Being 2: Feels Positive About Self	332 ^a
Financial Security 2: Source of Money	.637 ^b	Participated in religious groups	.526 ^b	Well Being 1: Can Take Care of Oneself	.972 ^b
Currently receives food stamps	-.494 ^b	Recreation and leisure	-.368 ^b	Well Being 2: Feels Positive About Self	.501 ^b

Note. ^a = F to Remove. ^b = Standardized Canonical Discriminant Function Coefficient.

Table 31

Discriminant Analysis of Significant MANOVA Results, ECC Area Social Interaction

Physical and Material Well Being	Statistic	Performance of Adult Roles	Statistic	Personal Fulfillment	Statistic
Financial Security 2: Source of Money	1,081 ^a	Participated in religious groups	327 ^a	Well Being 2: Feels Positive About Self	442 ^a
Financial Security 1: How Uses Money	164 ^a	Mobility and community access	235 ^a	Well Being 1: Can Take Care of Oneself	232 ^a
		Has taken any classes from a 2 year community college	126 ^a		
		Has taken classes at a 4 year college or university	123 ^a	Satisfaction 2: Positive Feelings About Life	199 ^a
Financial Security 2: Source of Money	.747 ^b	Mobility and community access	.479 ^b	Well Being 1: Can Take Care of Oneself	.589 ^b
Financial Security 1: How Uses Money	.398 ^b	Participated in religious groups	.450 ^b	Satisfaction: 2 Positive Feelings About Life	.559 ^b
		Has taken classes at a 4 year college or university	.332 ^b		
		Has taken any classes from a 2 year community college	.300 ^b	Well Being 2: Feels Positive About Self	-.538 ^b

Note. ^a = F to Remove. ^b = Standardized Canonical Discriminant Function Coefficient.

Table 32

Discriminant Analysis of Significant MANOVA Results, ECC Area Independent Living

Physical and Material Well Being	Statistic	Performance of Adult Roles	Statistic	Personal Fulfillment	Statistic
Financial Security 2: Source of Money	529 ^a	Has taken any classes from a 2 year community college	451 ^a	Well Being 2: Feels Positive About Self	357 ^a
Financial Security 1: How Uses Money	204 ^a	Has taken classes at a 4 year college or university	418 ^a	Satisfaction 2: Positive Feelings About Life	292 ^a
How well can buy own clothes at a store	145 ^a	Personal Relationships and Social Networks	334 ^a		
		Groups participated in religious groups	268 ^a		
Financial Security 2: Source of Money	.593 ^b	Has taken classes at a 4 year college or university	.558 ^b	Satisfaction: 2 Positive Feelings About Life	.722 ^b
Financial Security 1: How Uses Money	.468 ^b	Has taken any classes from a 2 year community college	.522 ^b	Well Being 1: Can Take Care of Oneself	.413 ^b
How well can buy own clothes at a store	.344 ^b	Personal Relationships and Social Networks	.512 ^b	Well Being 2: Feels Positive About Self	-.511 ^b
		Groups participated in religious groups	.387 ^b		

Note. ^a = F to Remove. ^b = Standardized Canonical Discriminant Function Coefficient.

Table 33

Discriminant Analysis of Significant MANOVA Results, ECC Area Self-Determination

Physical and Material Well Being	Statistic	Performance of Adult Roles	Statistic	Personal Fulfillment	Statistic
How often health or emotional problem caused youth to miss a social activity in the past month	751 ^a	Jobs in community	546 ^a	Well Being 2: Feels Positive About Self	691 ^a
		Recreation and leisure	198 ^a		
		Has taken classes at a 4 year college or university	167 ^a		
Financial Security 2: Source of Money	418 ^a				
How often health or emotional problem caused youth to miss a social activity in the past month .726	.726 ^b	Jobs in community	.799 ^b	Well Being 2: Feels Positive About Self	.988 ^b
		Recreation and leisure	.667 ^b		
		Has taken classes at a 4 year college or university	.525 ^b	Well Being 1: Can Take Care of Oneself	-.570 ^b
		Has taken any classes from a 2 year community college	.522 ^b		
Personal Relationships and Social Networks	-.474 ^b				
Financial Security 2: Source of Money	.548 ^b				

Note. ^a = F to Remove. ^b = Standardized Canonical Discriminant Function Coefficient.

Table 34

Discriminant Analysis of Significant MANOVA Results, ECC Area Assistive Technology

Physical and Material Well Being	Statistic	Performance of Adult Roles	Statistic	Personal Fulfillment	Statistic
Financial Security 2: Source of Money	1,614 ^a	Recreation and leisure	836 ^a	Well Being 1: Can Take Care of Oneself	667 ^a
Currently receives food stamps	887 ^a	Participated in religious groups	469 ^a	Satisfaction 2: Positive Feelings About Life	458 ^a
General health	517 ^a				
Financial Security 2: Source of Money .907	.907 ^b	Recreation and leisure	1.143 ^b	Satisfaction 2: Positive Feelings About Life	-1.545 ^b
Currently receives food stamps	.846 ^b	Participated in religious groups	.622 ^b	Well Being 1: Can Take Care of Oneself	1.786 ^b
General health	.589 ^b	Personal Relationships and Social Networks	.527 ^b		

Note. ^a = F to Remove. ^b = Standardized Canonical Discriminant Function Coefficient.

Table 35

Discriminant Analysis of Significant MANOVA Results, ECC Area Orientation and Mobility

Physical and Material Well Being	Statistic	Performance of Adult Roles	Statistic	Personal Fulfillment	Statistic
How often health or emotional problem caused youth to miss a social activity in the past month	554 ^a	Jobs in community	526 ^a	Well Being 1: Can Take Care of Oneself	725 ^a
		Has taken classes at a 4 year college or university	170 ^a	Satisfaction 2: Positive Feelings About Life	438 ^a
General health	352 ^a	Has taken classes from a vocational or technical school	142 ^a	Well Being 2: Feels Positive About Self	113 ^a
Financial Security 2: Source of Money	235 ^a	Registered to vote	113 ^a		
How often health or emotional problem caused youth to miss a social activity in the past month	.783 ^b	Jobs in community	.591 ^b	Well Being 1: Can Take Care of Oneself	-.452 ^b
		Has taken classes at a 4 year college or university	.419 ^b	Well Being 2: Feels Positive About Self	.335 ^b
General health	-.682 ^b				
Financial Security 2: Source of Money	-.495 ^b				

Note. ^a = F to Remove. ^b = Standardized Canonical Discriminant Function Coefficient.

Table 36

Discriminant Analysis of Significant MANOVA Results, ECC Area Academic Compensatory

Physical and Material Well Being	Statistic	Performance of Adult Roles	Statistic	Personal Fulfillment	Statistic
Financial Security 1: How Uses Money	881 ^a	Recreation and leisure	1,051 ^a	Well Being 1: Can Take Care of Oneself	118
Financial Security 2: Source of Money	542 ^a	Has taken any classes from a 2 year community college	591 ^a	Satisfaction 2: Positive Feelings About Life	99
Currently takes a prescription medicine related to disability	426 ^a	Has taken classes from a vocational or technical school	516 ^a		
How well can buy own clothes at a store	300 ^a	Personal Relationships and Social Networks	318 ^a		
Financial Security 1: How Uses Money	-.881 ^b	Recreation and leisure	1.074 ^b	Well Being 1: Can Take Care of Oneself	1.560 ^b
Financial Security 2: Source of Money	.564 ^b	Has taken any classes from a 2 year community college	.628 ^b	Satisfaction 2: Positive Feelings About Life	-1.458 ^b
Currently takes a prescription medicine related to disability	.537 ^b	Personal Relationships and Social Networks	.619 ^b		
How well can buy own clothes at a store	.455 ^b	Has taken classes from a vocational or technical school	.513 ^b		

Note. ^a = F to Remove. ^b = Standardized Canonical Discriminant Function Coefficient.

their respective values reported are those above which the sudden decrease occurred. Thus, only values for the variables most responsible for explaining the significant MANOVAs are listed in the previous tables.

Descriptive Discriminant Analysis Results

The descriptive discriminant analysis revealed that for the area of Physical and Material Well Being, the variable most responsible for the group differences across the majority of the ECC areas was *Financial Security 2: Source of Money*. The Performance of Adult Roles domain contained several variables that were responsible for group differences across the majority of the ECC areas. The variables most responsible were the three variables related to postschool education. The two variables from the Personal Fulfillment domain most responsible for explaining differences across the ECC areas were the variables *Satisfaction 2: Positive Feelings* and *Well Being 1: Can Take Care of Oneself*.

It should be noted that the DDA also identified other variables responsible for the differences between groups. However, those listed in the previous paragraph were found to be responsible for differences at a higher frequency and across more ECC areas than the other variables.

Additional Analysis

MANOVA Results

The 21 MANOVAs conducted for research question one were statistically significant with $p < .0001$ for each separate analysis. Effect sizes were measured and all were considered large, with the exception of the ECC area of Academic Compensatory and the QOL domain of Personal Fulfillment (Sink & Stroh, 2006). Based on these

results, it can be determined that instruction in the ECC areas did indeed have an effect on postschool QOL, and in most cases, the effect was quite large. What the results of the MANOVAs do not explain is the directionality of the differences. To determine if students who received instruction in the ECC areas had greater postschool QOL outcomes, means for the variables identified in the discriminant analysis as being most responsible for the respective significant MANOVA were examined. The means are reported for two categories, those who did and those who did not receive instruction in an ECC area as measured by the variables listed in Table 12.

Physical and Material Well Being

Table 37 contains the means for the postschool outcome variable *Financial Security 2: Source of Money* for each of the seven ECC areas. The variable *Financial Security 2: Source of Money* was the variable determined, through examination of the descriptive discriminant analysis results, to be the most important in explaining the significant MANOVAs for this QOL domain. The participants were divided into the two categories, those who did and those who did not receive instruction in an ECC area. The outcome variable was a composite variable formed as part of the exploratory factor analysis and has a possible range of 0 through 2. The composite variable was formed from two variables in the NLTS2, *Youth receives Social Security Income* and *Youth has allowance or other money that s/he can decide how to spend*.

The means were higher for 5 of the 7 ECC areas for those who did *not* receive instruction in the ECC areas. This indicates, as a group, those who had instruction in these areas also had fewer sources of income; they were more likely to receive income from either Social Security *or* from some other source. Examination of the means alone

Table 37

Means for Physical and Material Well Being Domain and ECC Areas

ECC Area		Physical and Material Well Being- Financial Security 2: Source of Money	
		ECC Instruction Provided	
		Yes	No
Social Interaction	Mean	0.81	1.80
	<i>N</i>	812	3,530
	<i>SD</i>	1.02	1.07
Independent Living	Mean	0.83	1.86
	<i>N</i>	1,017	3,325
	<i>SD</i>	1.03	1.00
Self-Determination	Mean	1.42	1.76
	<i>N</i>	1,840	2,502
	<i>SD</i>	1.23	0.97
Career Education	Mean	0.92	1.78
	<i>N</i>	819	3,523
	<i>SD</i>	1.07	1.04
Assistive Technology	Mean	1.76	1.24
	<i>N</i>	3,142	1,200
	<i>SD</i>	1.10	1.02
Orientation and Mobility	Mean	1.57	1.68
	<i>N</i>	2,554	1,788
	<i>SD</i>	1.19	0.95
Academic Compensatory	Mean	1.80	.93
	<i>N</i>	3,428	914
	<i>SD</i>	1.07	0.93

did not allow for a distinction between sources of income. Thus, a correlational analysis, the results of which are contained in Table 38, of the variables *Youth currently receives SSI* and *Youth has an allowance or other money that he/she can decide how to spend* with each of the ECC areas was conducted. The analysis revealed that Social Security income is positively correlated to receiving instruction for each of the ECC areas and money from other sources of income is negatively correlated to each ECC area. As Social Security is positively correlated with each ECC area and each ECC area is negatively correlated with other sources of income, instruction in the ECC areas is related to fewer sources of income with the income source more likely to be from Social Security.

Performance of Adult Roles

The QOL domain area of Performance of Adult Roles contained 10 different variables that could have been responsible for explaining the differences found between groups in the MANOVA. Three variables related to postsecondary school attendance were consistently statistically responsible for explaining the differences in the grouping (ECC) variables. The variables were: *has taken classes at a 4 year institution, a 2 year institution, or a technical college*. They accounted for differences in 6 of the 7 ECC areas (all but Assistive Technology).

As with the QOL domain area of Physical and Material Well being, a post-hoc analysis of means of these variables for those who did and who did not receive instruction in the ECC areas found that the means of those who did *not* receive instruction in individual ECC areas were higher than those who did, with very few exceptions. Those exceptions were: the means were higher for those who had *Orientation and Mobility Instruction* and *attended a 2 year college*, those who received *Assistive*

Table 38

Correlation Table for ECC Areas and Variables Comprising Financial Security 2: Source of Money Composite Variable

ECC Areas		Variables Comprising Composite Variable	
		Youth currently receives Social Security Income <i>n</i> = 3,965	Youth has an allowance or other money that he/she can decide how to spend <i>n</i> = 3,864
Social Interaction	Pearson Correlation	.348	-.575
Independent Living	Pearson Correlation	.338	-.477
Self-Determination	Pearson Correlation	.184	-.386
Career Education	Pearson Correlation	.326	-.543
Assistive Technology	Pearson Correlation	.407	-.222
Orientation and Mobility	Pearson Correlation	.358	-.166
Academic Compensatory	Pearson Correlation	.335	-.078

Note. All correlations were significant at the $p < .001$ level

Technology Services and *attended a 4 year college*, and those who received *Academic Compensatory Skills* and *attended a 4 year college*. The values for each of these variables had a possible range of 0 to 1. Table 39 contains the means for each of the postsecondary variables for those who did receive instruction in and those who did not receive instruction in the ECC areas. A mean that is italicized signifies a greater value for those who received instruction in an ECC area.

Generally, these results indicate those participants who received instruction in the ECC areas had a *lower* quality of life in the QOL domain of Performance of Adult Roles than those who did not receive instruction. Specifically, the results indicate, from

Table 39

Means for Performance of Adult Roles Domain and ECC Areas All Participants

ECC Area		Taken Classes at 2 year College		Taken Classes at Vocational School		Taken Classes at 4 year College		
		Yes	No	Yes	No	Yes	No	
		ECC Instruction Provided						
		Yes	No	Yes	No	Yes	No	
Social Interaction	Mean	0.13	0.61	0.09	0.21	0.11	0.40	
	<i>N</i>	812	3,530	812	3,530	812	3,530	
	<i>SD</i>	0.33	.41	0.28	0.41	0.31	0.49	
Independent Living	Mean	0.15	0.63	0.11	0.21	0.07	0.43	
	<i>N</i>	1,017	3,325	1,017	3,325	1,017	3,325	
	<i>SD</i>	0.36	0.48	0.32	0.41	0.26	0.49	
Self-Determination	Mean	0.44	0.58	0.10	0.25	0.26	0.40	
	<i>N</i>	1,840	2,502	1,840	2,502	1,840	2,502	
	<i>SD</i>	0.50	0.49	0.30	0.44	0.44	0.49	
Career Education	Mean	0.23	0.58	0.12	0.20	0.15	0.39	
	<i>N</i>	819	3,523	819	3,523	819	3,523	
	<i>SD</i>	0.43	0.49	0.33	0.40	0.36	0.49	
Assistive Technology	Mean	0.46	0.68	0.11	0.38	0.38	0.25	
	<i>N</i>	3,142	1,200	3,142	1,200	3,142	1,200	
	<i>SD</i>	0.50	0.47	0.32	0.49	0.49	0.43	
Orientation and Mobility	Mean	0.54	0.49	0.09	0.33	0.24	0.48	
	<i>N</i>	2,554	1,788	2,554	1,788	2,554	1,788	
	<i>SD</i>	0.50	0.50	0.29	0.47	0.43	0.50	
Academic Compensatory	Mean	0.43	0.85	0.09	0.55	0.39	0.17	
	<i>N</i>	3,428	914	3,428	914	3,428	914	
	<i>SD</i>	0.50	0.36	0.29	0.50	0.49	0.37	

examination of the means, that those who did *not* receive instruction in the ECC areas attended a postsecondary institution at a higher rate than those who did receive instruction in the ECC areas, with the above exceptions noted. This finding is unexpected, as instruction in the ECC areas was hypothesized to be related to increased postschool outcomes.

As the results were unexpected, an additional analysis was conducted. The analysis was based on a report authored by Marder (2006) concerning educational outcomes for students who are visually impaired with and without additional disabilities. Marder reported on educational outcomes for elementary and middle school students who were visually impaired in which the presence of additional disabilities, specifically mental retardation and/or developmental delays, were controlled for. Marder found lower scores in the educational outcome measures of grades and standardized test scores for the group of students who had additional disabilities. Based on Marder's findings, the same type of control was put in place with the participants of this study who had additional disabilities of mental retardation or developmental disabilities (*n, weighted* = 519). After controlling for additional disabilities, the same pattern was found as with all participants: The group who received instruction in the ECC areas generally attended a postsecondary institution at a lower rate. The ECC areas for which the means are higher for postsecondary attendance are listed in Table 40. Italicized values indicate those means that are higher for the group who received instruction in the respective ECC area. The presence of the additional disabilities of mental retardation and developmental delays does not explain the unexpected findings as the relationship for only one set of means

Table 40

Means for Performance of Adult Roles Domain and ECC Areas Mental Retardation and Developmental Disabilities Not Included

ECC Area		Taken Classes at 2 year College		Taken Classes at Vocational School		Taken Classes at 4 year College	
		Yes	No	Yes	No	Yes	No
		ECC Instruction Provided					
		Yes	No	Yes	No	Yes	No
Career Education	Mean	0.47	0.60	0.25	0.21	0.27	0.40
	<i>N</i>	357	3,407	357	3,407	357	3,407
	<i>SD</i>	0.50	0.49	0.44	0.41	0.45	0.49
Assistive Technology	Mean	0.55	0.69	0.14	0.39	0.45	0.25
	<i>N</i>	2,582	1,182	2,582	1,182	2,582	1,182
	<i>SD</i>	0.50	0.46	0.34	0.49	0.50	0.43
Orientation and Mobility	Mean	0.67	0.49	0.11	0.34	0.30	0.48
	<i>N</i>	2,020	1,744	2,020	1,744	2,020	1,744
	<i>SD</i>	0.47	0.50	0.31	0.47	0.46	0.50
Academic Compensatory	Mean	0.51	0.85	0.11	0.56	0.46	0.17
	<i>N</i>	2,853	911	2,853	911	2,853	911
	<i>SD</i>	0.50	0.36	0.31	0.50	0.50	0.38

changed, the means for *taken classes at a vocational school* for those who received *Career Education* instruction.

Further investigation into this finding, also through the comparison of means of various groups of the participants, indicated participants who did not spend time in a special education class attended postsecondary schools at a higher rate than those who did spend time in a special education class. An examination of the means of the variable *Any part of the day spent in a special education class* with zero indicating no part and

one indicating some part of the day spent in a special education class revealed higher means across 2 of the 3 outcome variables for those students who did not spend any time in a special education class. The results of the analysis are listed in Table 41.

Table 41

Means for Postsecondary Attendance by Time Spent in a Special Education Class

Any part of day spent in special education class		Taken Classes at 2 year College	Taken Classes at Vocational School	Taken Classes at 4 year College
No	Mean	0.56	0.09	0.50
	N	1,927	1,927	1,927
	SD	0.50	0.29	0.50
Yes	Mean	0.55	0.28	0.22
	N	1,862	1,862	1,862
	SD	0.50	0.45	0.41

These findings indicate the participants of this study who did not spend any time in a special education class, or conversely spent all their time in a general education class, generally attend postsecondary schools at a higher rate. This is evidenced by the greater value of the mean for the group that did not spend any part of the day in a special education class for 2 of the 3 outcome variables. The variables used to represent the ECC areas (see Table 12) are related to either goals or services as listed on an Individualized Education Plan and as such are “special education.” Thus, participation in the regular classroom may be a confounding variable causing the unexpected finding.

Personal Fulfillment

The QOL domain of Personal Fulfillment contained three different composite variables, which could have been responsible for the significant MANOVAs in this

domain area. The DDA found that all three variables were statistically responsible for explaining the differences across the seven grouping (ECC) variables. The two variables with the highest frequency were *Well Being 1: Can Take of Oneself* and *Satisfaction 2: Positive Feelings About Life*. As with the other two QOL domains, the means of each QOL variable were higher for those who did *not* receive instruction in the ECC areas, with the exceptions of *Orientation and Mobility* and *Satisfaction 2: Positive Feelings About Life* and *Self-Determination* and *Well Being 1: Can Take Care of Oneself*; the means for those who did receive instruction in the ECC areas was higher. However, although the means were higher, they were higher by less than one-tenth of a point.

The examination of means indicates that for the majority of outcomes, the individuals who received instruction in the ECC areas had lower or virtually the same QOL outcomes for this domain. Table 42 lists the means for each ECC area and the two outcome variables found to be consistently significantly responsible for the significant MANOVAs. The italicized values indicate higher means for those who had instruction in the respective ECC area.

As with the QOL domain of Performance of Adult Roles, this finding is unexpected. However, as with the QOL domain of Performance of Adult Roles, time spent in the general education environment assists in explaining the finding. The means for the variable, *Any part of the day spent in a special education class* were examined across the outcome variables. Table 43 contains the findings. The means of the outcome variables are higher for those that did not spend any time in a special education class, indicating time spent in the general education classroom is a possible confounding variable.

Table 42

Means for Personal Fulfillment and ECC Areas

ECC Area		Satisfaction 2: Positive Feelings About Life		Well Being 1: Can Take Care of Oneself	
		ECC Instruction Provided			
		Yes	No	Yes	No
Social Interaction	Mean	4.20	6.79	9.59	13.57
	<i>N</i>	812	3,530	812	3,530
	<i>SD</i>	2.40	1.34	4.25	9.59
Independent Living	Mean	4.52	6.86	10.24	13.62
	<i>N</i>	1,017	3,325	1,017	3,325
	<i>SD</i>	2.29	1.33	4.17	1.52
Self-Determination	Mean	6.05	6.50	12.29	12.21
	<i>N</i>	1,840	2,502	1,840	2,502
	<i>SD</i>	2.38	1.67	3.79	1.67
Career Education	Mean	4.57	6.71	9.74	13.54
	<i>N</i>	819	3,523	819	3,523
	<i>SD</i>	2.53	1.43	4.40	1.58
Assistive Technology	Mean	6.24	6.49	12.41	13.91
	<i>N</i>	3,142	1,200	3,142	1,200
	<i>SD</i>	2.06	1.33	3.13	1.15
Orientation and Mobility	Mean	6.31	6.30	12.36	13.48
	<i>N</i>	2,554	1,788	2,554	1,788
	<i>SD</i>	2.20	1.31	3.39	1.42
Academic Compensatory	Mean	6.29	6.35	12.69	13.34
	<i>N</i>	3,428	914	3,428	914
	<i>SD</i>	2.03	1.24	3.06	1.40

Table 43

Means for Personal Fulfillment Domain by Time Spent in a Special Education Class

Any part of day spent in special education class		Satisfaction 2: Positive Feelings About Live	Well Being 1: Can Take Care of Oneself
	Mean	7.06	13.86
No	<i>N</i>	1,927	1,927
	<i>SD</i>	1.36	1.42
	Mean	5.58	11.70
Yes	<i>N</i>	1,862	1,862
	<i>SD</i>	2.09	3.55

Summary

The follow-up analysis of the MANOVAs from research question one revealed the means for the QOL domains of Physical and Material Well Being, Performance of Adult Roles, and Personal Fulfillment were lower for the group that received instruction in the ECC Areas. A lower mean indicates a lower quality of life.

For the domain of Physical and Material Well Being, participants who received instruction in the ECC areas had fewer sources of income. Instruction in the ECC was found to be positively correlated to receiving Social Security Income and negatively correlated to receiving money from other sources.

The examination of the means from the domain of Performance of Adult Roles indicated that the means were generally lower for those who received instruction in the ECC areas for the postsecondary variables that were responsible for the significant MANOVAs in this domain. This was an unexpected finding, as instruction in the ECC areas was hypothesized to be related to greater postschool quality of life outcomes. The presence of additional disabilities was not found to be a confounding factor. However,

the participants who spent no time in a special education classroom generally had higher outcomes in this domain, indicating that time spent in the regular classroom may be a variable warranting further investigation.

The domain of Personal Fulfillment also had lower outcome means or means that were virtually the same for those who received instruction in the ECC areas. This indicates that instruction in the ECC areas leads to lower postschool quality of life outcomes for this domain. This was an unexpected finding. As with the Performance of Adult Roles domain, time spent in the special education classroom was examined to determine if it was a variable of interest. As the outcome means for this domain were higher for those that spent no time in the special education classroom, the time spent in the general education classroom was identified as an important variable to help explain the unexpected finding.

Research Question Two

Research question two stated:

Q2 Which Expanded Core Curriculum area or combination of areas best predicts postschool quality of life?

and was answered through the use of all subsets multiple regression. As little research has been completed in the area of using the ECC areas to predict or explain QOL outcomes, a form of multiple regression called “all subsets” regression was run in SAS 9.1. This type of regression allows inspection of multiple models for each number of predictors entered into the model. R squared was the selection criterion used to judge models both for number of predictors and combinations of predictors. Appendices C, D, and E contain the results of the all subsets regression for each of the three outcome domains. The results of

the all subsets regression are shared with the reader for replication purposes and as a starting point for future research involving regression analysis and the ECC.

Variables

Composite outcome variables were developed to represent each of Halpern's (1993) QOL domains. Composite outcome variables for Halpern's three domains were developed from the variables listed on Table 6 and from the factor analysis. These three new variables, labeled the same as Halpern's domain labels, are Physical and Material Well Being, Performance of Adult Roles, and Personal Fulfillment.

The predictor variables were developed as part of the exploratory factor and reliability analysis. There were 13 predictors representing the seven ECC areas of Academic Compensatory, Orientation and Mobility, Assistive Technology, Independent Living, Social Interaction, Career Education, and Self-Determination.

Assumptions

One assumption of multiple regression is independence of observations. As this assumption was violated by the sample design of the NLTS2, the AM software package was used to address the independence assumption. Strata, cluster and instrument weights provided by SRI International were used for each model tested. The assumptions of multiple regression are; linearity in the relationship between the predictors and the outcome variables, homoscedasticity, normally distributed errors, and no perfect multicollinearity. The above assumptions were tested for each model, and it was determined that each model met each assumption.

Model Selection

Initial model selection was based on examining R squared for a full model with 13 predictors. Examination of models began at the number of predictors that explained 5% less of the variance in the outcome variable than the full model. The starting point of examining models that explained less than 5% of the total variance was chosen as the full models contained many individual predictors which were not significant and had extremely high VIF values. The amount chosen was an arbitrary value and it was deemed that explaining 5% less of the total variance was an acceptable trade off in order to develop models that contained all significant predictors and low VIF values.

Additionally, no model was selected as being the “best.” The intention of research question two was to identify areas of the ECC that explained postschool outcomes for each QOL domain area. The presentation of multiple models, if possible, for each domain area was done to determine if common ECC areas existed in and across domains.

An example of model selection follows. For the domain of Performance of Adult Roles, the full model with 13 predictors identified 62.3% of the variance as identified by the all subsets regression developed in SAS and reported in Appendix D. The first model to explain variance within 5% of the full model was the first subset model identified with four predictors, which had an R squared of 60.2%. This model was then run in AM to test for overall and individual predictor significance. The model was then run in SPSS to ensure that regression assumptions were not violated. The process described above was conducted for each model reported in Tables 44 through 48.

Table 44

Regression Model 1 for Physical and Material Well Being

R ²	Variables in the Model	β	Significance Testing	p
.348	Full Model (All 13 ECC Variables)		F(13, 45) 7.34 ^a	<.001
.291	Model 1, 5 variables, 2 nd subset, $n = 4,342$		F(5, 53) 7.76 ^a	<.001
	Academic Compensatory 2: Braille and Technology Use	-0.666	-3.271 ^b	.002
	Assistive Technology 1: Services Provided and Devices Used	0.58	2.327 ^b	.024
	Career Education 1: Worked Off Campus	-0.326	-2.402 ^b	.020
	Career Education 2: Worked On Campus	0.385	2.607 ^b	.012
	Social Interaction 1: Student Interaction with Others	-0.195	-3.026 ^b	.004
.358	Model Outliers and Influential Cases Removed, $n = 4,252$		F(5, 50) 7.49 ^a	<.001
	Academic Compensatory 2: Braille and Technology Use	-0.596	-2.996 ^b	.004
	Assistive Technology 1: Services Provided and Devices Used	0.684	2.785 ^b	.007
	Career Education 1: Worked Off Campus	-0.375	-2.895 ^b	.005
	Career Education 2: Worked On Campus	0.459	3.227 ^b	.002
	Social Interaction 1: Student Interaction with Others	-0.208	-3.388 ^b	.001

Note. ^a = Adjusted Wald Test. ^b = t-statistic.

Table 45

Regression Model 2 for Physical and Material Well Being

R ²	Variables in the Model	β	Significance Testing	P
.348	Full Model (All 13 ECC Variables)		F(13, 45) 7.34 ^a	<.001
.310	Model 2, 6 variables 1 st subset, <i>n</i> = 4,342		F(6, 52) 8.02 ^a	<.001
	Academic Compensatory 1: Provision of Learning Strategies	0.551	1.963 ^b	.055
	Career Education 1: Worked Off Campus	-0.336	-2.792 ^b	.007
	Career Education 2: Worked On Campus	0.324	2.886 ^b	.006
	Career Education 3: Received Training or Counseling	0.751	2.018 ^b	.048
	Self-Determination: Student Action and Self-Advocacy Goals	0.327	2.362 ^b	.022
	Social Interaction 1: Student Interaction with Others	-0.148	-2.385 ^b	.020
.396	Model Outliers and Influential Cases Removed, <i>n</i> = 4,252		F(6, 49) 7.68 ^a	<.001
	Academic Compensatory 1: Provision of Learning Strategies	0.561	2.035 ^b	.047
	Career Education 1: Worked Off Campus	-0.288	-2.723 ^b	.009
	Career Education 2: Worked On Campus	0.406	4.370 ^b	<.001
	Career Education 3: Received Training or Counseling	0.424	1.353 ^b	.182
	Self-Determination: Student Action and Self-Advocacy Goals	0.448	4.068 ^b	<.001
	Social Interaction 1: Student Interaction with Others	-0.174	-3.076 ^b	.003

Note. ^a = Adjusted Wald Test. ^b = t-statistic.

Table 46

Regression Model 1 for Performance of Adult Roles

R ²	Variables in the Model	β	Significance Testing	P
.623	Full Model (All 13 ECC Variables)		F(13, 45) 7.63 ^a	<.001
.602	Model 1: 4 variables, 1 st subset, $n = 4,342$		F(4, 54) 19.69 ^a	<.001
	Assistive Technology 1: Services Provided and Devices Used	-0.967	-2.64 ^b	.011
	Career Education 1: Worked Off Campus	0.451	2.77 ^b	.007
	Independent Living 1: Completes Functional Skills	4.844	5.65 ^b	<.001
	Self-Determination: Student Action and Self-Advocacy Goals	1.154	4.93 ^b	<.001
.692	Model Outliers and Influential Cases Removed, $n = 4,247$		F(4, 52) 29.81 ^a	<.001
	Assistive Technology 1: Services Provided and Devices Used	-0.987	-3.119 ^b	.003
	Career Education 1: Worked Off Campus	0.442	3.191 ^b	.002
	Independent Living 1: Completes Functional Skills	4.836	6.369 ^b	<.001
	Self Determination: Student Action and Self-Advocacy Goals	1.276	6.005 ^b	<.001

Note. ^a = Adjusted Wald Test. ^b = t-statistic.

Table 47

Regression Model 2 for Performance of Adult Roles

R ²	Variables in the Model	β	Significance Testing	p
.623	Full Model (All 13 ECC Variables)		F(13, 45) 7.63 ^a	<.001
.615	Model 2: 5 variables 1 st subset, <i>n</i> = 4,342		F(5, 53) 20.67 ^a	<.001
	Career Education 3: Received, Training or Counseling	1.897	5.614 ^b	<.001
	Independent Living 2: Uses Environmental Information	1.621	5.111 ^b	<.001
	Self-Determination: Student Action and Self-Advocacy Goals	1.885	8.185 ^b	<.001
	Social Interaction 1: Student Interaction with Others	0.184	2.518 ^b	.015
	Social Interaction 2: Behavior of Students with Social Skills Goals on IEP	-0.487	-5.662 ^b	<.001
.707	Model Outliers and Influential Cases Removed, <i>n</i> = 4,246		F(5, 51) 31.09 ^a	<.001
	Career Education 3: Received Training or Counseling	2.069	7.647 ^b	<.001
	Independent Living 2: Uses Environmental Information	1.497	5.848 ^b	<.001
	Self-Determination: Student Action and Self-Advocacy Goals	1.993	10.659 ^b	<.001
	Social Interaction 1: Student Interaction with Others	0.216	3.562 ^b	.001
	Social Interaction 2: Behavior of Students with Social Skills Goals on IEP	-0.502	-7.272 ^b	<.001

Note ^a = Adjusted Wald Test. ^b = t-statistic. No model from the all subsets regression contained a grouping of six variables in which all variables had a significant t-test.

Table 48

Regression Model for Personal Fulfillment

R ²	Variables in the Model	β	Significance Testing	p
.521	Full Model (All 13 ECC Variables)		F(13, 45) 6.70 ^a	<.001
.484	Model 1: 5 variables, 1 st subset, <i>n</i> = 4,342		F(5, 53) 12.41 ^a	<.001
	Academic Compensatory 2: Braille and Technology Use	0.640	2.321 ^b	.024
	Assistive Technology 1: Services Provided and Devices Used	-0.478	-2.761 ^b	.008
	Independent Living 1: Completes Functional Skills	2.971	5.058 ^b	<.001
	Social Interaction 1: Student Interaction with Others	0.135	2.095 ^b	.041
	Social Interaction 2: Behavior of Students with Social Skills Goals on IEP	0.156	3.079 ^b	.003
.592	Model Outliers and Influential Cases Removed, <i>n</i> = 4,237		F(5, 53) 48.30 ^a	<.001
	Academic Compensatory 2: Braille and Technology Use	0.763	2.782 ^b	.007
	Assistive Technology 1: Services Provided and Devices Used	-0.390	-2.523 ^b	.014
	Independent Living 1: Completes Functional Skills	3.703	8.341 ^b	<.001
	Social Interaction 1: Student Interaction with Others	0.138	2.231 ^b	.003
	Social Interaction 2: Behavior of Students with Social Skills Goals on IEP	0.135	2.879 ^b	.006

Note. ^a = Adjusted Wald Test. ^b = t-statistic. No model from the all subsets regression contained a grouping of six variables in which all variables had a significant t-test.

Each model was examined for outliers and influential cases. Cases were considered outliers if they were plus or minus 3 standard deviations and influential if they had a Cook's D greater than 1. Those cases were examined for obvious coding errors; no apparent coding errors seemed to exist. As the number of outliers represented approximately 100 individuals, additional research involving those participants may be warranted to determine if they fell above or below the regression line and what exactly caused them to be outliers. Results of the regression model analysis with all cases, and outlying and influential cases deleted are listed in Tables 44 through 48.

The tables indicated each of the ECC areas, with the exception of Orientation and Mobility, were important in explaining or predicting postschool outcomes. This was evidenced by the presence of the various ECC areas across the models presented. The beta values presented for the variables representing the ECC areas indicated the strength and direction of the relationship between that particular predictor and the respective outcome domain with all other predictors in that model being held constant. For example, the predictor variable for the ECC area of Independent Living in Table 46 was relatively large and positive. This indicated increasing the level at which participants could perform these skills would lead to greater/higher postschool outcomes for the domain of Performance of Adult Roles.

Results

Research question two examined the extent to which the ECC areas could be used to explain or predict postschool outcomes. Based on the amount of variance explained in the outcome variables, the ECC can explain or predict a considerable amount of the variance particularly for the outcome domains of Performance of Adult Roles and

Personal Fulfillment. The models identified were able to explain 60.2% and 61.5% of the variance in the outcome variable of Performance of Adult Roles, and 48.4% of the variance in the outcome variable of Personal Fulfillment. The ECC did not explain as great an amount of variance for the area of Physical and Material Well Being; 29.1% and 31.0% of the variance was explained respectively for the two models developed. This indicates that there are other factors outside the ECC areas that need to be identified in order to explain the variance in postschool outcomes.

Summary

Research question two utilized multiple regression to examine the amount of variance in postschool outcomes that could be explained by instruction in the ECC areas. Models were developed through an all subsets regression for each of the three domains identified by Halpern (1993). Assumptions were tested and were met for each model. It was determined that the variables used to represent the ECC areas were able to explain large amounts of variance in the postschool QOL domains. All areas of the ECC were important in explaining the variance of the outcomes as they are all represented in one of the models. The exception to this was the ECC area of Orientation and Mobility. It was not represented in any of the models developed. The ECC areas were able to explain approximately 30%, 60%, and 50% of the variance for the domains of Physical and Material Well Being, Performance of Adult Roles, and Personal Fulfillment, respectively.

Research Question Three

Research question three stated:

- Q3 After controlling for instruction in the Expanded Core Curriculum, is the relationship between postschool quality of life and age when a participant started to receive services for his or her vision impairment statistically significant?

and was answered through the use of a hierarchical regression model. The models developed from research question two were used, but the age when the participants started to receive specialized services was entered into the regression models last, after controlling for instruction in the ECC. The age when specialized services began was drawn from the answer given in response to question B2c from the parent survey. The question reads: “About how old was [he/she] when [he/she] started getting special services from a professional for this difficulty?”

Variables

As with research question two, the predictor variables were the composite variables developed from the factor analysis, and were the same variables used to develop the models in research questions two. The ECC variables were entered into the model first, followed by the age of the participant when s/he started to receive specialized services. The outcome variables were also the same as those used in research question two: Physical and Material Well Being, Performance of Adult Roles, and Personal Fulfillment.

Assumptions

Hierarchical regression has the same assumptions as multiple regression, discussed for research question two. As with research question two, all assumptions were tested and were met.

Determination of Impact

The statistic used to determine if age of participant when s/he started to receive services explains a significant *additional* amount of the variance of the outcome variable is a change in R squared. A regression was run for the ECC areas, age when services

began was added to the second step of the model, resulting in an analysis for each step of each model. Age was determined to be significant if the change in the F statistic was found to be significant. However, due to the sampling design of the NLTS2 the computation of the F statistic by SPSS is incorrect. The AM software is unable to complete a hierarchical regression. As such, R squared was reported without and with age when services began, as R squared is not affected by sample design. None of the models from research question two show more than a .005 increase in R squared, thus age when services began was not a significant predictor in the participants' postschool quality of life. The results for each of the three QOL domains are reported in Tables 49 – 51. The tables show the amount of additional variance that was able to be explained by adding age when specialized services were initiated as a second step in the hierarchical regression models.

Results and Summary

Research question three attempted to determine if the age of the participant when specialized services began explained a significant additional amount of variance in the postschool outcome variables. Using a hierarchical regression model, it was determined

Table 49

R² Change for Physical and Material Well Being, Models 1 and 2

Model	R ² Without Age	R ² With Age	Change in R ²
1	.291	.295	.004
2	.309	.309	.000

Table 50

R² Change for Performance of Adult Roles, Models 1 and 2

Model	R ² Without Age	R ² With Age	Change in R ²
1	.601	.602	.001
2	.615	.615	.000

Table 51

R² Change for Personal Fulfillment

Model	R ² Without Age	R ² With Age	Change in R ²
1	.484	.485	.001

that age explained less than 1% of additional variance for the models developed. Thus, age when services began was not a significant predictor for the participants in this study.

Summary

Preliminary Analysis

This chapter began by reporting the results of the exploratory factor and reliability analysis that had been conducted for the ECC and QOL areas. Composite variables were developed as a result of the analysis and were used to answer the three research questions.

Research Question One

Research question one was examined through the use of MANOVAs, with all MANOVAs being statistically significant. Additionally, 20 of the 21 MANOVAs had large effect sizes as measured by partial eta squared. As all MANOVAs were significant with 20 of 21 having large effect sizes, it was determined instruction in the ECC areas was related to postschool outcomes.

The results of post-hoc descriptive discriminant analysis explained which variables were most responsible for explaining the differences between groups of participants: those who did and those who did not receive specialized instruction in an ECC area in the 2000 - 2001 school year. It was determined the variable *Financial Security 2: Source of Money* was the variable the most responsible for explaining the significant MANOVAs for the Physical and Material Well Being domain. The variables related to postsecondary education were the most responsible for explaining the differences for the significant MANOVAs for the Performance of Adult Roles domain, and the variables *Well Being 1: Can Take Care of Oneself* and *Satisfaction 2: Positive Feelings About Life* were the most responsible for the significant MANOVAs for the Personal Fulfillment domain.

Research Question One Additional Analysis

The results of the MANOVAs did not indicate if the QOL outcomes were better for those who received instruction in the ECC areas in the 2000 – 2001 school year. Thus, an examination of the means for the variables determined to be the most responsible for the significant differences found by the MANOVAs was conducted. The means were generally found to be lower for those who received instruction in the ECC areas, indicating a lower postschool quality of life for those who received instruction in the ECC areas. This was an unexpected finding, as postschool outcomes were hypothesized to be greater for those that had received instruction in the ECC areas. Variables not initially included as part of this study were examined to determine if they could assist in explaining the finding. The presence of additional disabilities, specifically mental retardation and developmental delays, was not found to be a variable that could explain

the unexpected finding. However, the amount of time spent in a special education classroom did explain the unexpected findings, with higher postschool outcomes associated with *no* time spent in a special education classroom. As the variables used to represent the ECC areas were all specialized instruction variables, this may account for the unexpected findings.

Research Question Two

Research question two was examined through the use of an all subsets multiple regression. All ECC areas, with the exception of Orientation and Mobility, were represented in a model. As representation in a model signifies importance, the areas of Academic Compensatory, Career Education, Assistive Technology, Independent Living, Social Interaction, and Self-Determination are all considered important. All five regression models were statistically significant with the models for Performance of Adult Roles explaining the largest amount of variance, followed by the model for Personal Fulfillment, and last the models for Physical and Material Well Being. Based on the results of the regression models, the ECC areas can be used to explain or predict postschool outcomes, although based on the results of research question one the models may be explaining diminished outcomes.

Research Question Three

Research question three, through the use of a hierarchical regression model, examined the role age of participants when they started to receive specialized services played in explaining quality of life outcomes. Age was not found to have a significant effect on any of the three QOL outcome domains. Age when services began explained less than 1% of additional variance in the postschool outcome variables.

CHAPTER V

DISCUSSION

This chapter begins by summarizing and explaining the findings of each of the three research questions, which examined the relationship between the Expanded Core Curriculum (ECC) and postschool quality of life (QOL). As each research question contained unexplained findings related to the apparent ineffectiveness of the ECC, possible reasons for the unexpected findings are discussed. Next, overarching conclusions based on the aggregate findings of the research questions are discussed. Limitations such as design of the NLTS2, participant selection, and participant time out of high school are discussed. Ideas for further research and a proposed study, based on the findings and limitations of this study are then shared.

Research Question One

Research question one investigated the postschool quality of life (QOL) outcomes of students who were visually impaired and receiving specialized services or instruction in various Expanded Core Curriculum (ECC) areas in the 2001 – 2002 school year versus those who did not receive instruction in the same year. The research question stated:

- Q1 Is there a difference in quality of life outcomes for students who are visually impaired and who received instruction in the Expanded Core Curriculum areas versus quality of life outcomes for students who are visually impaired and who did not receive instruction in the Expanded Core Curriculum areas?

MANOVA Results

This research question was answered using MANOVAs, as there was one independent variable for each of the seven ECC areas of interest and several dependent variables for each of the QOL domains of Physical and Material Well Being, Performance of Adult Roles, and Personal Fulfillment. This resulted in 21 MANOVAs being conducted. Each MANOVA was statistically significant with $p < .0001$ for each MANOVA. Effect sizes were measured and all were considered large, with the exception of Academic Compensatory Skills and Personal Fulfillment (Sink & Stroh, 2006). Based on these results, it can be determined that instruction in the ECC areas did indeed have an effect on postschool QOL, and in most cases, the effect was quite large. Table 29 contained the results of each MANOVA. What the results of the MANOVAs did not explain is the variable or variables responsible for the group differences and the directionality of the differences. The following sections discuss results from the follow-up descriptive discriminant analysis and examine the directionality of the significant MANOVAs.

Discriminant Analysis

The results from a discriminant analysis (DA), completed for each significant MANOVA, were reported in Tables 30 through 36, one for each ECC area variable. The QOL variables listed in the tables were those that were statistically responsible for the corresponding significant MANOVAs, both as individual variables and as a group of variables.

The values listed for each QOL variable ranked the relative importance of each variable in explaining the differences, or significant MANOVAs, that were found. While

every possible QOL variable had a value, only those with the highest relative importance were reported. As the MANOVAs were conducted by QOL domain area, the results of the DA are discussed below in the same manner.

Physical and material well being. In the QOL domain of Physical and Material Well Being, there were seven possible variables that could have explained the difference in groups found by the MANOVAs. Of the seven possible variables, the composite variable *Financial Security 2: Source of Money* was the most important (for the four ECC areas of Career Education, Social Interaction, Independent Living, and Assistive Technology), and the second most important (for the two ECC areas of Self-Determination and Academic Compensatory) variable responsible for explaining differences in 6 of the 7 ECC areas. It was still important, as it had the third largest value, in the seventh ECC area as well, Orientation and Mobility.

The variable, *Financial Security 2: Source of Money*, is a composite variable developed from the exploratory factor analysis (EFA). It was composed of two variables, *youth currently receives Social Security income* and *youth has an allowance or other money he/she can decide how to spend*. These were yes / no answers and were summed to form the composite variable, resulting in a possible value range of 0 to 2. A post-hoc examination of the composite variable and the ECC areas determined the mean was generally higher for those who did *not* receive instruction in each ECC area. The number of sources of income decreased for students who received ECC instruction.

However, examination of the means did not indicate which source of income decreased with instruction in the ECC areas. An analysis of the correlations between the variables comprising the composite outcome variable revealed that instruction in the ECC

areas was positively correlated to Social Security income and negatively correlated to income from other sources, presumably employment. Taken together, these results indicated that instruction in the ECC areas was related to fewer sources of income, and the source of income was more likely to be Social Security income.

One possible reason for this finding is the large percentage of participants enrolled in a postsecondary school alone or in conjunction with some other activity (77.8%, as indicated on Table 9). Postsecondary attendance and employment were not mutually exclusive, as indicated by the 58.4% of participants who did both. However, it may be that those individuals who attended a postsecondary institution were not employed full time, as they were going to school. Thus, they did not receive enough income to disqualify them for Social Security income. As 100% of the participants in this study were under 21 years of age and might still be enrolled in a postsecondary institution, this hypothesis can be tested by future research as data from waves four and five of the NLTS2 become available.

Performance of adult roles. The QOL domain area of Performance of Adult Roles contained 10 different variables that could have been responsible for explaining the differences found between groups in the MANOVA. Three variables related to postsecondary attendance were consistently statistically responsible for explaining the differences found by the significant MANOVAs for this domain. The variables were; *has taken classes at a 4 year institution, a 2 year institution, or a technical college.* They accounted for differences in 6 of the 7 ECC areas (all but Assistive Technology). As with the QOL domain area of Physical and Material Well Being, a post-hoc analysis of means of the QOL variables for those who did and who did not receive instruction in the ECC

areas found that the means of those who did *not* receive instruction in individual ECC areas were higher than those who did, with very few exceptions. Those exceptions were: The means were higher for those who *received mobility services and attended a 2 year college*, those who *received assistive technology services and attended a 4 year college*, and those who *received vision services and attended a 4 year college*.

Generally, these results indicated those participants who received instruction in the ECC areas had a *lower* quality of life in the QOL domain of Performance of Adult Roles than those who did not receive instruction. Specifically, the results indicated, from examination of the means, those who did *not* receive instruction in the ECC areas attended a postsecondary institution at a higher rate than those who did receive instruction in the ECC areas, with the above exceptions noted. This finding was unexpected, as instruction in the ECC areas was hypothesized to be related to increased postschool outcomes.

One possible explanation for this finding is a variable coding or labeling error. All variables of interest in the working data file were compared to the master data file, and no apparent errors of this type were found. In addition, random individual values for the variables from the working file and master file were compared, and the values were found to be consistent across cases.

A second possible explanation is based on a report authored by Marder (2006) concerning education outcomes for students who are visually impaired with and without additional disabilities. Marder reported on educational outcomes for elementary and middle school students who were visually impaired in which the presence of additional disabilities, specifically mental retardation and/or developmental delays, were controlled.

Marder found lower scores in the educational outcome measures of grades and standardized test scores for the group of students who had additional disabilities. Based on Marder's findings, the same type of control was put in place with the participants of this study who had mental retardation or developmental delays (n , *weighted* = 519). After controlling for these disabilities, the same pattern was found as with all participants: The group who received instruction in the ECC areas generally attended a postsecondary institution at a lower rate. The ECC areas for which the means were higher for postsecondary attendance were listed in Table 40. Bolded values indicated those means that were higher for the group who received instruction in the respective ECC area. The presence of the additional disabilities of mental retardation and developmental delays did not explain the unexpected findings as the relationship for only one set of means changed, (*taken classes at a vocational school*) for those who received *Career Education* instruction.

A third explanation is rooted in the variables used to represent the ECC areas themselves. In examining the three ECC areas that had a higher postschool outcome for at least one of the outcomes for those who received instruction in the ECC area, an underlying pattern is noticeable. These three ECC areas were Orientation and Mobility, Assistive Technology, and Academic Compensatory. All three of these ECC areas were developed from variables that asked if a service was provided. An assumption of this study was that services provided implied instruction was provided during the 2001 – 2002 school year, the year in which the survey was conducted. However, a service provided does not necessarily mean instruction was given. For instance, a student may have used an assistive technology device, braille book, or a white cane, and thus would

have been coded as a yes on the survey, but instruction in the use of these items may have happened in previous years. The other four areas of the ECC: Career Education, Social Interaction, Self-Determination, and Independent Living, were all developed from questions on the survey that asked if the areas were a primary goal on the student's Individualized Education Plan (IEP). As these were primary goal areas on an IEP, it is more likely some form of instruction was involved. However, the NLTS2 data are limited in that they only indicate if these were areas addressed on participants' IEPs, by a simple yes / no answer. Actual instruction or instructional time for areas on the IEP was not captured as part of the NLTS2 data collection process. It may be that services and goals as worded on the NLTS2 survey were interpreted differently by the respondents. The lack of amount of instruction data is both a limitation of the study and an area of needed research.

While there is little or no research to corroborate the following explanation, it has been my experience that instruction in certain areas of the ECC often does not occur if a choice is made to enroll the student in a regular education class rather than receive instruction in an ECC area. Often such a choice is made when a class is needed for high school graduation or for a college prerequisite. Time spent learning the ECC and time in the general education classroom can be, and for an area such as Orientation and Mobility is, mutually exclusive. As such, an examination of the means of the variable, *Any part of the day spent in a special education class* (0 indicating no part and 1 indicating some part of the day spent in a special education class) revealed higher means across 2 of the 3 outcome variables for those students who *did not* spend any time in a special education class. Table 41 presented the results of this analysis. This indicated that participants who

spent their entire day in general education classes attended postsecondary institutions at a higher rate.

Comparing the two groups of participants; those who spent no time in a special education class ($n = 1,927$), and those who spent some time in a special education class ($n = 1,862$) revealed a very different type of education for these two groups. Table 52 highlights these findings. Participants who spent their entire day in the general education setting were far less likely to have received specialized instruction in the form of IEP goals, and were far more like to utilize services of assistive technology and vision services / braille instruction.

Table 52

Percentage of Students who had IEP Goals or Services Provided

ECC Area / Variable Label		Percentage of Students who had IEP Goals or Received Services	
		No part of the day in special education class	Some part of the day in special education class
Services Provided	Assistive Technology / Assistive Technology Service Provided	82.7	55.9
	Orientation and Mobility / Mobility Service Provided	47.9	66.0
	Academic Compensatory / Vision Services or Braille Instruction Provided	89.8	63.8
Special Instruction Provided	Social Interaction / Social Skills Goal	2.9	23.2
	Independent Living/ Functional or Life Skills Goal	8.6	29.7
	Self-Determination / Self-Advocacy Goal	34.2	51.0
	Career Education / Vocational Skills Goal	0.6	28.4

Given the apparent difference in percentages between the two groups, participation in the general education classroom is one underlying factor responsible for the unexpected finding. The data captured by the NLTS2 coupled with the sample design, limits this finding to that of a descriptive nature only, as significance testing without adjusting for the sample design is highly susceptible to Type I error (Hahs-Vaughn, 2005). As such, this is an additional area ripe for research.

It also needs to be stressed that instruction or services received in three ECC areas was associated with higher postschool outcomes. These were the exceptions noted above and represented the ECC areas of Orientation and Mobility, Assistive Technology, and Academic Compensatory. As such, these areas are of paramount importance when developing programming for students who are visually impaired.

Personal fulfillment. The QOL domain of Personal Fulfillment contained three different composite variables which could have been responsible for the significant MANOVAs in this domain area. The DA found that all three variables were statistically responsible for explaining the differences across the seven grouping (ECC) variables. The two variables with the highest frequency in the descriptive discriminate analysis were *Well Being 1: Feels Positive About Self* and *Satisfaction 2: Positive Feelings About Life*. As with the other two QOL domains, the means of each QOL variable were higher for those who *did not* receive instruction in the ECC areas. There were two exceptions to this general pattern. Regarding the ECC area variable *Mobility Services* and the QOL variable *Satisfaction 2: Positive Feelings About Life* and the ECC area variable *Self-Determination* and the QOL variable *Well Being 1: Can Take Care of Oneself*, the outcome means for those who received instruction in the respective ECC areas were

higher. The examination of means (see Table 42) indicated that for the majority of outcomes, the individuals who received instruction in the ECC areas had lower QOL outcomes for this domain.

As with the QOL domain of Performance of Adult Roles, this finding was unexpected. However, as with the QOL domain of Performance of Adult Roles, time spent in the general education environment assisted in explaining the finding. The means for the variable *Any part of the day spent in a special education class* were examined across the outcome variables *Well Being 1: Feels Positive About Self* and *Satisfaction 2: Positive Feelings About Life* (see Table 43). The means of the outcome variables were higher for those that did not spend time in a special education class. Also, as with the domain of Performance of Adult Roles, the confounding variable *Any part of the day spent in a special education class* and the differing education it represented (see Table 52) for the participants of this study warrants further investigation by future research.

Summary

Research question one, through a series of MANOVAs, found significant differences with large effects occurring between groups of students who had and who had not received instruction in the ECC areas. Discriminant analysis of the significant MANOVAs identified the variables statistically responsible for those differences. A comparison of the means of the statistically responsible variables for the two groups of students, those who did and those who did not receive specialized instruction in various ECC areas, indicated that for all three of the QOL domains, those who received instruction in the ECC had lower mean scores. Additional analysis revealed that time

spent in the general education classroom may be a confounding variable related to the unexpected findings.

Research Question Two

Research question two, utilizing the statistical analysis of an all subsets multiple regression, examined various combinations of the ECC and how they explained the variance in QOL domain outcomes. Combinations that explained the greatest amount of variance in each of the QOL domains of Physical and Material Well Being, Performance of Adult Roles, and Personal Fulfillment were identified. Research question two stated:

Q2 Which Expanded Core Curriculum area or combination of areas best predicts postschool quality of life?

Results

Two models were identified for the domains of Physical and Material Well Being and Performance of Adult Roles. Only one model was able to be identified for the domain of Personal Fulfillment, as models with more than five predictors, while significant overall, contained individual nonsignificant predictors. The presence of a nonsignificant predictor indicated that predictor was not explaining an appreciable amount of variance in the outcome variable. There were 13 possible predictors representing seven ECC areas. The ECC area Sensory Efficiency was not represented as no unique variables capturing this ECC area were included in the NLTS2. The variables that could have been used to represent this ECC area were used to represent other ECC areas. The ECC area of Recreation and Leisure was not represented in any regression analysis as the exploratory factor analysis did not reveal a reliable factor from the representative variables in the NLTS2. All other ECC areas were represented by one or two composite variables identified as reliable in the exploratory factor analysis. Tables 14

– 21 presented the lists of variables that comprised the various composite variables for the respective ECC areas.

Multicollinearity. In reviewing the beta values for some of the predictor variables it was noted that some of the values were negative, indicating the presence of that variable in that model decreased the respective QOL outcome. This may mean that multicollinearity existed in the models, as predictors with signs opposite of what is expected are indicators of possible multicollinearity. However, given the results of research question one, it is quite possible the signs of the beta values are correct as instruction in the ECC areas was shown to be related to lower means of the outcome variable. The existence of multicollinearity, while not desirable, is unavoidable to some degree (Field, 2005). Multicollinearity has the effect of reducing the amount of R squared and masking the importance of variables (Field, 2005). While these are important considerations, R squared was acceptable for all models reported in this study, as were the significance levels for each of the predictors. The beta values reported in this study were not intended for use in any type of formula. As such, their magnitude, relationship, positive or negative to the outcome variable, and the value of R squared were the values of interest.

Broad results. The models for the Performance of Adult Roles domain performed the best in explaining the differences in outcomes. The predictors explained 60.2% and 61.5% in models 1 and 2, respectively. The model developed for the Personal Fulfillment domain explained 48.5% of the variance in outcomes, while the models for the Physical and Material Well Being domain performed the poorest explaining 29.1% and 31.0% of the differences in outcomes for models 1 and 2, respectively indicating other unidentified

factors are responsible for explaining or predicting this outcome domain. These findings were quite encouraging as, when taken as a whole, they can be interpreted as instruction in the ECC explains postschool outcomes. While there were many other factors outside those of the ECC, the ECC is responsible for explaining a large amount of postschool outcomes across the three domains. However, as the means of the outcome variables were generally lower for those who received instruction in an ECC area the models developed most likely explained lower outcomes.

Nonsignificant ECC areas. One interesting finding is that the ECC area of Orientation and Mobility (O&M), while found in many of the all subsets regression models using SAS 9.1, was not identified as significant in any of the models when the sampling design of the NLTS2 was accounted for through the use of the AM software. This is most likely a type I error, as SAS cannot control for the sample design of the NLTS2 while AM is able to control for the design with sample, strata, and cluster weights provided by SRI International. Additionally, the composite O&M variable by itself explained only 4.9%, 9.4%, and 3.8% of the variance in the outcome variables for the domains Physical and Material Well Being, Performance of Adult Roles, and Personal Fulfillment, respectively. This is contradictory to other research which has stated orientation and mobility skills were important in getting and retaining a job (Crudden et al., 1998).

One possible explanation for the lack of significance of this ECC area is the nature of the outcome variables. As the QOL outcome variables were composite variables, it may be that the O&M variable would have significantly explained the variance in some of the individual variables, such as Vocation, Career, and Employment.

However, when the other variables for the respective domain areas were added in to form the composite outcome variables, the ability of the O&M variable to explain the variance of the outcome variable was reduced.

A second explanation of the perceived low importance of O&M is the time frame in which participants were studied. Curry and Hatlen (1988) proposed different instructional levels based on levels of need of various ECC areas at different times in a student's public school years. It is possible that the NLTS2 was conducted at a time of relatively low instructional need or level for orientation and mobility skills.

It should also be noted that the all subsets regression produced literally hundreds of different models that explained a large amount of the variance of the outcome variables (refer to Appendices C, D, and E). The five models reported in this study were the models that explained the highest proportion of variance with the least number of predictors (parsimony), attempted to keep low levels of multicollinearity, and contained only significant predictors. As such, other models not tested in this study may exist that include the O&M variable.

Common predictors. As itinerant teachers of the visually impaired have very little direct instruction time with their students (Correa-Torres & Howell, 2004; Griffin-Shirley et al., 2004; Wolffe et al., 2002), identification of a combination of ECC areas that can explain the greatest amount of outcome differences are important. The predictor variables related to career education and social interaction were significant predictors in 4 of the 5 models. However, the beta values for some of the variables for these ECC areas were negative, indicating they detracted from the outcome variable of interest. An examination of the variables (Tables 16 and 21) that formed these composite variables gave no

apparent answer as to why the relationship would be negative. An examination of the models (Tables 44 - 47) that contained the career education composite variables found that for the area of career education, the negative relationship existed only in models with more than one career education composite variable. As such, multicollinearity was suspected to exist in those models.

The variables related to the four other areas of the ECC, Academic Compensatory, Assistive Technology, Independent Living, and Self-Determination, were found to be significant in 3 of the 5 models. Of those variables, the variables related to Independent Living were always highly significant and had large, if not the largest positive beta values, indicating the relative importance in explaining the variance of the respective model. This is consistent with other research (Shaw et al., 2007), which found independent living skills to be significantly, positively correlated with employment. Yet, other research (Lewis & Iselin, 2002) has found children who are visually impaired significantly lag behind their sighted peers in acquisition of these skills, and Wolffe et al. (2002) found teachers of the visually impaired spend only 7% of their time teaching these skills and do so in a “casual” (Wolffe et al., 2002, ¶16) fashion. Given the importance of independent living skills as documented by Shaw et al. coupled with an apparent lack of instruction in the skill area (Wolffe et al.), IEP teams should consider the ECC area of Independent Living when constructing a student’s IEP.

In addition, the areas of Academic Compensatory, Assistive Technology and Self-Determination need to be taken into consideration as well as they all had positive beta values, indicating they increased postschool outcomes, for models they were a part of. In addition, the positive beta values for the areas of Academic Compensatory and Assistive

Technology corroborate the results of research question one, which found instruction in those two areas was related to higher postschool outcomes in the areas of Performance of Adult Roles and Physical and Material Well Being.

Summary

Research question two examined which ECC areas best explained or predicted the variance in postschool QOL outcomes. An all subsets regression was conducted to identify the most parsimonious models with the lowest suspected levels of multicollinearity. In order of explained variance, models for the QOL domains of Performance of Adult Roles, Personal Fulfillment, and Physical and Material Well Being were developed.

The models were examined for common predictors. It was determined that the predictors representing the areas of Social Interaction and Career Education were the most important in terms of frequency although at times they had negative beta values. Independent Living was the most important in terms of magnitude. The results, contrasted against other literature which found direct instruction in Independent Living skills by teachers of the visually impaired is minimal (Wolffe et al., 2002) at best, even though positive postschool outcomes (Shaw et al., 2007) have been shown to be related to instruction in these areas.

Research Question Three

Research question three examined the role that the amount of instruction played in postschool outcomes. Amount of instruction was thought to be related to age when a participant started to receive specialized instruction, as participants identified at a younger age were presumed to have received more instruction. This was examined with

hierarchical regression using the models identified in research question two. The variable B2c asked parents “About how old was [he/she] when [he/she] started getting special services from a professional for this difficulty?” and was used to identify the age at which specialized services began. Research question three stated:

- Q3 After controlling for instruction in the Expanded Core Curriculum, is the relationship between postschool quality of life and age when a participant started to receive services for his or her vision impairment statistically significant?

The results of the hierarchical regression, while not tested for significance due to the sampling design of the NLTS2, showed that age when services began after controlling for instruction in the ECC explained less than 1% of additional variance in the outcome variables. Thus, age when services began is not related to postschool outcomes. Of the participants in the study, 52% received specialized services at birth and just over 95% received services by age 7 or 1st grade for most students. Table 53 contained the age breakdown of when the participants started to receive services.

Table 53

Age When Participants Started to Receive Specialized Services

Age	Frequency	Percent	Cumulative Percent
Birth	2,276	52.4	52.4
1	138	3.2	55.6
2	42	1.0	56.6
3	654	15.1	71.6
4	51	1.2	72.8
5	816	18.8	91.6
6	111	2.6	94.2
7	67	1.5	95.7
8	28	0.6	96.3
9	16	0.4	96.7
10	64	1.5	98.2
11	39	0.9	99.1
12	35	0.8	99.9
13	4	0.1	100.0
Total	4,342	100.0	

As with the majority of findings in this study, this finding was unexpected. One possible reason for this finding is that other factors are masking the importance of age. As some participants in this study were 21 years of age and received services starting when they were born, it is plausible that other factors had more influence on the postschool outcomes than did age when services were first received.

Overarching Conclusions

Alone, the findings of each research question are valuable. However, taken as an aggregate they may provide additional insight into the value of the ECC. As such, the following sections discuss the results from that perspective.

Encouraging Findings

While this study found unexpected results, it did determine the importance of instruction in several ECC areas. For example, research question one undeniably found that those participants who had instruction in or received services in the ECC areas of Assistive Technology, Academic Compensatory, Self-Determination, and Orientation and Mobility had higher postschool outcomes in at least one of the three outcome domains. This finding is quite encouraging as it can be used to advocate for greater amounts of instructional time in these ECC areas, or can be used to prioritize the time a teacher has available to spend with a student.

The results of research question two were quite positive as well. Not only were large amounts of the variance in outcomes in two of the three domains explained, but 6 of the 7 ECC areas were represented in the regression models developed. Additionally the majority of individual predictors in those models had positive beta values, indicating instruction in those ECC areas led to greater postschool outcomes.

When examining research questions one and two for common ECC areas, the areas of Academic Compensatory, Assistive Technology, and Self-Determination were found to be related to increased postschool outcomes across both questions. This highlights the importance of these ECC areas to enhanced postschool outcomes.

While some results of research question two may appear to be contradictory to the results of research question one, which found only four areas of the ECC were related to higher postschool outcomes, it is most likely the type of variable used in the respective research questions which caused the difference in findings. Research question one utilized a single dichotomous (yes / no) variable to represent instruction in an ECC area. The ECC areas in question two were represented by the composite variables developed through the exploratory factor analysis and as such contained multiple variables thought to be related to each ECC area. Again, as with research question one, research question two highlighted the importance of the ECC as is indicated by the positive beta values for the models developed.

Unfavorable Findings

In examining the findings of the research questions as an aggregate, the efficacy of the Expanded Core Curriculum as a whole in increasing postschool outcomes for the participants in this study is absent, as instruction in some ECC areas was shown to be associated with a lower quality of life. This was demonstrated by lower means for the outcome variables of interest for each of the three QOL domains in research question one for those receiving instruction in those respective ECC areas. While the findings of research question two indicated a large amount of variance is attributable to the ECC areas, research question one indicated the outcomes were lower. Research question two

corroborated this somewhat as all models developed had at least one predictor with a negative beta value. Finally, research question three, which considered age when specialized instruction began, was not able to show that specialized instruction at an earlier age explained differences in postschool outcomes.

In addition, it seemed the presence of a confounding variable, *Any time spent in a special education class*, made a distinction between the participants. First, the group who spent the entire day in a general education classroom had consistently higher outcome means. Second, the specialized education received by the groups appeared to be quite different, with the group who had the higher outcome means utilizing specialized services more than specialized instruction.

Questions Based on Findings

Given these findings, that instruction in the ECC areas for these participants was associated with lower QOL outcomes, several questions arose; chief among them was the effectiveness of the ECC. All the results indicated the ECC was not effective when looking at postschool outcomes for this group of participants. However, secondary analyses revealed that some of the results could be explained by whether or not participants spent any part of the day in a special education classroom, with those who spent no part of the day in a special education classroom demonstrating higher QOL outcomes. Given this finding, what led to the success of the students who participated in a general education classroom all day? Participating all day in the general education classroom with only support services provided is certainly one of the goals of special education in general. Did earlier instruction in the ECC lead to this in-school outcome? Were these students more competent in some way earlier in their education, and have

they always been in general education classes all day? Unfortunately, the NLTS2 did not capture information that would allow these questions to be addressed. However, they may be able to be addressed by information in the SEELS database or smaller more focused studies.

Limitations

There are several limitations of this particular study. The first of these is the issue of which students were included in the original sample. As noted, participants were identified as visually impaired in the NLTS2 study if their primary disability category indicated they were visually impaired. Kirchner and Diamant (1999) have indicated that this method severely undercounts the number of students who are visually impaired at the national level. This means the sample from which the participants were drawn may not be representative of all students who are visually impaired, particularly those who have vision impairment listed as a secondary or tertiary disability.

A second limitation is related to the independent variables used to answer research question one. These variables differentiated the two groups, those who did and those who did not receive specialized instruction, for one school year only. Some students may have received instruction in the various ECC areas in years other than the year in which these data were collected. However, of all the data collected by the NLTS2, this was the most appropriate question to use to differentiate between groups in the sample.

A third limitation is the amount of time students have received instruction in the ECC areas. While some students may have received instruction for a number of years, others may have received instruction for only a very limited amount of time. Research

question three had attempted to address this issue, but perhaps the variable was not sensitive enough to find differences, given that 91.6% of participants were reported to receive services by the time they entered school. Additionally, it may be that age of service initiation is not as important as which services are provided at what intensity across the age span.

Perhaps the largest limitation of this study is the sample design employed in the NLTS2. The design allows for a nationally representative sample and does not interfere with simple statistical analysis such as frequencies. However, when research questions involving any type of significance testing are investigated, specialized statistical software necessary to complete the significance testing may not be available.

An additional limitation of this study is the length of time the participants have been out of school. The oldest participants were 21 years of age. Since the vast majority of participants were enrolled in some type of postsecondary schooling, many of the postschool outcomes have yet to occur. As the last two waves of data become available, this limitation could be addressed in a replicate study.

A final limitation of the study is the idea of the ECC itself. Is it a construct/theory or is it a curriculum? In an attempt to validate the ECC and move the field forward, this study presumed the ECC was a curriculum with the theory that instruction in that curriculum would be related to enhanced postschool outcomes. However, the variables from the NLTS2 used to represent the various ECC areas were chosen in a somewhat subjective manner based on face validity only. A replicate study utilizing a panel of experts to choose variables to represent the ECC areas would certainly strengthen the analysis of this relationship.

Implications

An initial examination of the results of this study determined that those participants who received instruction in the ECC areas had lower postschool outcomes for some of the ECC areas and higher postschool outcomes for others. It also revealed that the ECC areas can be used to explain a large amount of variance for two of the three outcome domains. Finally, it was determined that age when specialized services began does not explain differences in postschool outcomes.

A more in-depth analysis revealed that the lower outcomes for the domain of Physical and Material Well Being may be related to postsecondary attendance, and the confounding variable, *any part of the day spent in a special education class* may help explain some of the lower outcomes found for the domains of Performance of Adult Roles and Personal Fulfillment. It was also hypothesized that other factors may be masking the variable of age when the participants started to receive services.

Future Research

Generally, the findings indicated additional research needs to be conducted. As participants get older and additional waves of data from the NLTS2 are collected and disseminated, there will be much more variance in the outcomes. As the majority of the sample is still involved in postsecondary schooling at some level, the type and amount of current outcomes is somewhat limited.

Additionally, more research is needed about time spent in the general education classroom. Major differences were found in the type of specialized education provided between those participants who spent time in a special education classroom versus those

who spent no time in a special education classroom. The extent of these differences and their implications warrants further investigation.

Instruction

The composite variables used in the regression analysis related to Independent Living and Self-Determination were found to be positive, significant, and relatively strong predictors of postschool outcomes for all three outcome domains (Tables 45 – 48). Yet, only 23.4% and 42.4% respectively of participants had this as a primary goal on their IEPs. Given the importance of instruction in these two areas for the participants of this study, more time spent learning the skills associated with these two areas by students who are visually impaired is warranted.

Future Research

As with any study, additional research needs are highlighted by the findings of the current study. Given the unexpected nature of the majority of findings of this study, much future research is needed.

Participation in General Education

The variable *Any time spent in a special education class* was identified as a possible confounding variable in research question one. This was one, simple dichotomous variable that highlighted extreme differences in the type of education provided to two groups of students; those who did and those who did not spend time in a special education class. It seems there is much more to be explored concerning this topic. For example, why were these students not receiving instruction in the ECC? It appears they had the requisite skills necessary to function as adults in society as is evidenced by their higher outcome scores. Perhaps even more basic, the question of why one group of

students is doing better needs to be asked. The setting, frequency, and duration of earlier specialized instruction in these skill areas in earlier years of the participants' education would be beneficial information, as would information related to their general education history.

Postsecondary Attendance

There is a paucity of published research concerning individuals who are visually impaired and their postsecondary institution experience. As a large majority of the participants in this sample attended a postsecondary institution, information about that stage of their lives will be important as they move on to the next. The NLTS2 contains rich sources of information specific to postsecondary school attendance. Description of the postsecondary experience would be a logical place to start with future research, followed by more in-depth statistical analysis concerning relationships between postsecondary experiences and the life experiences that follow.

Employment

The participants in this sample were employed at an approximate rate of 70% (see Table 9). This figure is much higher than the rates of 25% - 30% for adults who are visually impaired reported in other studies (Houtenville, 2003; Kirchner & Schmeidler, 1997; Trupin et al., 1997). However, the rate in this study is most likely not a full employment rate, as approximately 60% of those employed were also enrolled in a postsecondary institution. It will be interesting to follow these participants as they leave college in successive waves of the NLTS2 and are eligible for full time employment.

Depth

The NLTS2 is a broad research study. It covers many areas with a plethora of variables. However, many of the variables use a simple yes / no scale. The sample design also renders many statistical analysis procedures impossible without the use of very specialized software. Smaller studies isolating one of the single topics covered by the NLTS2, using a less complicated design, and examining the topic in-depth could be of benefit to the field.

A Proposed Future Study

The findings of this study have determined instruction in the ECC areas is related to lower postschool outcomes. However, the previous discussion in this section has highlighted areas of possible research that may assist in explaining the findings. It appears that in-depth information about the participants' lives previous to the NLTS2 would be beneficial. A study merging the timeline of SEELS and NLTS2 while continuing to capture much of the same information would provide the information necessary to address the areas of additional research mentioned above and in explaining the unexpected findings.

To be most beneficial, several changes would be necessary. The first is focusing on students who were visually impaired. The primary disability categorization limits the generalizability of the NLTS2. Any student with a visual impairment would be included.

Second, more in-depth information is necessary. This includes such things as frequency and duration of specialized instruction, amount of time spent in special education, and a listing of specific areas of specialized instruction. As the services of Assistive Technology and Vision Services were utilized at a higher percentage for

students who were in the general education classroom for their entire day, detailed information about these services is necessary.

Third is sample design. The NLTS2 employed an extremely complicated sample design which rendered the most common statistical software packages ineffectual for significance testing. It is not possible to draw a simple random sample from the entire population of students who are visually impaired, as a national master list of students who are visually impaired does not exist. However, many teachers of the visually impaired across the nation could be contacted for a list of students on their caseloads. To generate as large of a teacher list as possible, membership lists of teachers of the visually impaired could be purchased from professional organizations, professional listservs could be utilized, as could outreach departments from schools for the blind across the nation. Participants in the study could then be randomly selected from the student caseload lists supplied.

A study employing much of the same information as the SEELS and NLTS2 with the changes noted above could assist in explaining the unexpected findings. In addition, such a study could help determine the effectiveness or lack of effectiveness of the ECC in explaining in-school and postschool outcomes.

Summary

Research Questions

This chapter discussed the results of the three research questions investigated in this study. In general, the results of research question one indicated lower QOL outcomes for those participants who received instruction in the ECC areas. Although instruction received or services provided in the areas of Academic Compensatory, Assistive

Technology, and Orientation and Mobility were shown to be related to greater postschool outcomes. The results of research question two indicated that variables related to the ECC areas were able to explain large amounts of variance in the postschool outcomes of the participants. Finally, it was determined that age when services began did not explain additional postschool outcome variances.

Research question one contained many unexpected findings. The variable *Any time spent in a special education class* was identified as a possible confounding variable related to the lower postschool outcomes for the QOL domains of Performance of Adult Roles and Personal Fulfillment. The large percentage of participants still taking classes at a postsecondary institution was offered as one possible reason why outcomes were lower for those who received instruction in the ECC areas for the domain of Physical and Material Well Being.

The results of research question two indicated that instruction in the ECC areas explained a great deal of the differences in postschool outcomes for students who are visually impaired. Individually, the ECC areas of Independent Living and Self-Determination were identified as being significant, relatively important, and positively related to outcomes in all three domains.

The results of research question three determined that age when specialized services began did not assist in explaining *additional* differences in outcomes for the participants of the study. One possible reason for this finding was that other variables masked the impact of the age variable. This was suggested as some of the participants were identified 21 years earlier, and thus many other uncontrolled factors could be responsible for the differences observed.

Implications

The greatest implication of this study is that it highlighted the need for additional research in a multitude of areas. A second implication is that instruction in the ECC areas of Independent Living and Self-Determination is warranted as instruction in those areas was positively and significantly related to increasing postschool outcomes across the three QOL domains.

Future Research

Two of the areas identified for additional research were the areas of postsecondary experiences and employment. Postsecondary experiences were identified as areas of needed research as there were a large number of participants enrolled in a postsecondary school, and it is often a stepping-stone between high school and “real life” As such, learning about those experiences may assist in identifying factors that are related to quality of life. The area of employment was identified as an area for future research as the participants of this study had an employment rate of approximately 70%. While that percentage most likely does not represent full-time employment, it is higher than that found by other research (Houtenville, 2003; Kirchner & Schmeidler, 1997; Trupin et al., 1997).

Final Thoughts

The relationship between the ECC and postschool outcomes is not a simple correlation. The ECC is one of many intertwined factors that together form experiences and knowledge that lead to postschool outcomes. Unwinding the construct of the ECC from the larger set of experiences to determine its sole role in explaining outcomes is worthwhile, as areas of it have been shown to be related to increased postschool

outcomes. While this study has shown the ECC areas of Academic Compensatory, Assistive Technology, Independent Living, Self-Determination, and Orientation and Mobility are associated with higher postschool outcomes, other ECC areas are associated with lower postschool outcomes. As such, additional research is necessary to determine why this is the case.

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APPENDIX A

ECC Skill Area, Source, Question, Possible Answers and Coding

Appendix A

ECC Skill Area, Source, Question, Possible Answers and Coding

ECC Skill Area	Source, Question, Possible Answers and Coding
Social Interaction	<p data-bbox="513 401 829 430">Wave 1 Parent Interview</p> <p data-bbox="513 436 1390 499">D10(D20) How well would you say [YOUTH] has gotten along with other students at school this school year? Would you say...?</p> <p data-bbox="537 506 1328 535">1. Very well, 2. Pretty well, 3. Not very well, or 4. Not at all well 5. MIXED, SOME WELL, SOME NOT, 6. DOES NOT INTERACT WITH OTHER, -7 REFUSED, -8. DON'T KNOW</p> <p data-bbox="513 636 1406 699">D11 (D21) How well would you say [he/she] has gotten along with teachers this school year ? Would you say...?</p> <p data-bbox="537 705 1414 800">1. Very well, 2. Pretty well, 3. Not very well, 4. Not at all well, 5. MIXED, SOME WELL, SOME NOT, 6. DOES NOT INTERACT WITH TEACHERS, -7. REFUSED, -8. DON'T KNOW</p> <p data-bbox="513 837 1373 900">F1D. How frequently does [YOUTH] interact with others using e-mail or taking part in chat rooms? Would you say</p> <p data-bbox="537 907 1386 970">1, Several times a day, 2. Once a day, 3. Several times a week, 4. Once a week, 5. Less often, -7 REFUSED, -8 DON'T KNOW</p> <p data-bbox="513 1005 1419 1100">F8 (G9). During the past 12 months, about how many days a week did [YOUTH] usually get together with friends[outside of school and] outside of organized activities or groups. Would you say.....?</p> <p data-bbox="537 1106 1419 1201">0. Never, 1. Sometimes, but not every week, 2. 1 day a week, 3. 2 or 3 days a week, 4. 4 or 5 days a week, 5. 6 or 7 days a week, -7. DON'T KNOW, -8. REFUSED</p> <p data-bbox="513 1239 1409 1302">F9 (G10).During the past 12 months , has [he/she] been invited by friends to social activities like over to their home or to a party?</p> <p data-bbox="537 1308 1131 1337">1. YES, 2. NO, -7. REFUSED, -8. DON'T KNOW</p> <p data-bbox="513 1373 1373 1436">F10 (G11A). During the past 12 months, how often have [his/her] friends called [YOUTH] on the phone? Would you say...</p> <p data-bbox="537 1442 1419 1537">1. Never, 2. Rarely/less than once a month, 3. A few times a month, but not every week,4. About once a week, 5. Several days a week, -7. REFUSED, -8. DON'T KNOW</p> <p data-bbox="513 1575 1406 1638">G1. I am going to read you a list of behaviors and I want you to tell me how often [YOUTH] acts this way.</p> <p data-bbox="513 1644 1341 1738">How often does [YOUTH]... [READ EACH ITEM AND THEN ASK "Would you say Never, Sometimes, or Very Often?"] [0=NEVER, 1=SOMETIMES, 2=VERY OFTEN]</p> <p data-bbox="537 1745 1419 1904">a. Join group activities without being told to, such as a group having lunch together? b. Make friends easily? c. End disagreements with you calmly? d. Seem self-confident in social situations, such as parties or group outings? e. Get into situations that are likely to result in trouble? f. Start conversations rather than waiting for others to start [IF NEEDED: can</p>

ECC Skill Area	Source, Question, Possible Answers and Coding
	<p>include sign language and other means of communication]? g. Receive criticism well? h. Behave at home in a way that causes problems for the family? i. Control temper when arguing with peers other than siblings? k. Speak in an appropriate tone at home [IF NEEDED: what the family considers appropriate for that youth]?</p> <p>G2. People have a variety of strengths and interests. How good would you say [YOUTH] is at ...READ FIRST ITEM, THEN ASK, Would you say very good, pretty good, not very good, or not at all good? CODE RESPONSE. READ REMAINING ITEMS, CODING THE RESPONSE FOR EACH ITEM. [4=VERY GOOD, 3=PRETTY GOOD, 2=NOT VERY GOOD, 1=NOT AT ALL GOOD]</p> <p>d. being sensitive to other people's feelings?</p>
	<p>Wave 1 Teacher Survey</p> <p>C1. In general, how well does this student do each of the following in this class? PLEASE MARK ONLY ONE BOX ON EACH LINE. Not well at all, Not very well, Well, Very Well.</p> <p>a. Get along with other students, c. Control his or her behavior to act appropriately in class.</p> <p>C2. Please indicate how often this student does each of the following in this class. PLEASE MARK ONLY ONE BOX ON EACH LINE. Never, Sometimes, Very Often, Don't Know.</p> <p>a. Argue with others, c. Act impulsively, d. Fight with others.</p> <p>C6. How often does this student do each of the following in this class? PLEASE MARK ONLY ONE BOX ON EACH LINE. Rarely, Sometimes, Usually Almost always, Not applicable.</p> <p>b. Take part in group discussions, d. Withdraw from social contact or class activities.</p>
	<p>Wave 1 Program Survey</p> <p>D4. For this school year, what are the primary goals for this student? PLEASE MARK ALL THAT APPLY.</p> <p>Build social skills</p> <p>E6. How much progress do you believe this student is making toward each kind of goal for the transition to adulthood? PLEASE MARK ONLY ONE BOX ON EACH LINE. MARK "NOT APPLICABLE" IF THE STUDENT DOES NOT HAVE A PARTICULAR KIND OF GOAL.</p> <p>No progress, A little progress, Some progress A lot of progress, Not applicable</p> <p>f. Social/interpersonal goals</p>
Assistive Technology	<p>Wave 1 Parent Interview</p> <p>B3d (B5D). Does [YOUTH] use... [1 = YES, 2 = NO]</p> <p>b. Portable Braille note taker or writer? d. Optical devices, such as near</p>

ECC Skill Area	Source, Question, Possible Answers and Coding
	<p>vision magnification, telescopic devices, or bioptic lenses? f. Assistive technology, such as voice synthesizers or software to enlarge the size of the print on the computer screen? g. Any other devices to help [him/her] see or read?</p> <p>H1A. During the past 12 months, has [YOUTH] received any of the following services? [YES =1, NO =2]</p> <p>m. Assistive technology services/devices, such as help getting/using any kind of equipment that helps people with a disability, such as a tape recorder or reading machine?</p> <p>W1 Teacher Survey</p> <p>B8. Which of the following, if any, are provided to this student to help him or her in this class? <i>PLEASE MARK ALL THAT APPLY.</i></p> <p>Books on tape, Use of a calculator for activities not allowed other students (e.g., during tests), Communication aids (e.g., Touch Talker, manual printing board), Use of computer for activities not allowed other students (e.g., to produce work other students write, use of spell checker when other students do not use one), Computer software designed for students with disabilities, Computer hardware adapted for student's unique needs (e.g., alternative keyboards, switch interface), Other.</p> <p>W1 Program Survey</p> <p>D7. Which of the following services has been provided this student from or through the school system during this school year (including services the school contracted from other agencies). <i>PLEASE MARK ONE BOX ON EACH LINE.</i> Yes, No, Don't know.</p> <p>b. Assistive technology services/devices</p>
Career Education	<p>W1 Parent Survey</p> <p>H1A. During the past 12 months, has [YOUTH] received any of the following services? [YES =1, NO =2]</p> <p>p. Career counseling, help in finding a job, training in job skills or vocational education?</p> <p>I1A. During the past 12 months, did [YOUTH] participate in any school sponsored work activities, like a work study job, internships or a school-based business? [NOTE: BY SCHOOL WE MEAN ANY SETTING WHERE YOUTH RECEIVES INSTRUCTION.]</p> <p>1. YES, 2. NO, -7. REFUSED, -8. DON'T KNOW</p> <p>W1 Program Survey</p> <p>C13. What percentage of this student's school day currently is spent in the two activities below (please do not include after-school employment)? <i>PLEASE MARK ONLY ONE BOX ON EACH LINE.</i> None, 1%-24%, 25%-49%, 50%-74%, 75%-99%, 100%, Don't Know</p> <p>a. School-sponsored work experience on the school campus, b. School-</p>

ECC Skill Area	Source, Question, Possible Answers and Coding
	<p>sponsored work experience off campus</p> <p>C14. Since starting high school, which of the following classes or services has this student received from or through the school system? <i>PLEASE MARK ALL THAT APPLY.</i></p> <p>A formal assessment of career skills or interests, Career counseling, Job readiness or prevocational training, Instruction in looking for jobs, Job shadowing / work exploration, Internship / apprenticeship, Tech-prep program, Entrepreneurship program, Other work experience (paid or unpaid), Specific job skills training, Referrals to potential employers / other job placement support, Job coach, e.g., staff who work with employer to modify jobs for this student, monitor student performance on the job, None of these, Don't know</p> <p>D4. For this school year, what are the primary goals for this student? <i>PLEASE MARK ALL THAT APPLY.</i></p> <p>Develop prevocational skills. Develop vocational skills</p> <p>E6. How much progress do you believe this student is making toward each kind of goal for the transition to adulthood? <i>PLEASE MARK ONLY ONE BOX ON EACH LINE. MARK "NOT APPLICABLE" IF THE STUDENT DOES NOT HAVE A PARTICULAR KIND OF GOAL.</i></p> <p>No progress, A little progress, Some progress A lot of progress, Not applicable</p> <p>b. Vocationally oriented goals</p>
Orientation and Mobility	<p>W1 Parent Survey</p> <p>B3d (B5D). Does [YOUTH] use... [1 = YES, 2 = NO]</p> <p>e. Mobility devices, such as a cane, or electronic travel aids?</p> <p>H1A. During the past 12 months, has [YOUTH] received any of the following services? [YES =1, NO =2]</p> <p>g. Orientation and mobility services?</p> <p>W1 Program Survey</p> <p>B6. Please indicate how well this student performs each of the following mobility activities. Does he or she do each activity?</p> <p>Not very well—can do the task only within a familiar routine when there is no novelty introduced, or needs a considerable amount of prompting to do it. Pretty well—performs the task consistently in at least one setting or inconsistently but well in several settings. Very well—performs the task well in many settings over a period of time. <i>PLEASE MARK ONLY ONE BOX ON EACH LINE.</i></p> <p>Not very well, Pretty well, Very Well, Don't know</p> <p>a. Travel using a sighted guide to all familiar locations, b. Travel indoors using rotely learned routes, c. Travel to other school areas or other buildings</p>

ECC Skill Area	Source, Question, Possible Answers and Coding
	<p>using rotely learned routes, d. Create new routes between familiar places indoors, e. Execute a route, given a set of verbal directions to an unfamiliar location within one building, f. Execute a route, given a set of verbal directions to an unfamiliar location in another building, g. Locate an unfamiliar place by using numbering systems, h. Orient self to an unfamiliar room, i. Solicit help to orient self to a building, j. Solicit help to orient self to a high school campus or to a workplace</p> <p>D7. Which of the following services has been provided this student from or through the school system during this school year (including services the school contracted from other agencies). <i>PLEASE MARK ONE BOX ON EACH LINE.</i> Yes, No, Don't know</p> <p>i. Mobility training</p>
Recreation and Leisure	<p>W1 Parent Interview</p> <p>F1C. Does [he/she] use a computer for: [YES =1, NO =2, NA=3]</p> <p>2. Playing games? 3. The Internet?</p> <p>F1D. How frequently does [YOUTH] interact with others using e-mail or taking part in chat rooms? Would you say...</p> <p>1, Several times a day, 2. Once a day, 3. Several times a week, 4. Once a week, 5. Less often, -7 REFUSED, -8 DON'T KNOW</p> <p>F2 (F4). During the past 12 months, has [YOUTH] taken lessons or classes [outside of school] in things like art, music, dance, a foreign language, religion, or computer skills?</p> <p>1. YES, 2. NO, -7. REFUSED, -8. DON'T KNOW</p> <p>F3(G5). During the past 12 months, has [he/she] participated in any school activity outside of class, such as sports teams, band or chorus, school clubs, or student government?</p> <p>1. YES, 2. NO, -7. REFUSED, -8. DON'T KNOW</p> <p>F4 (G6). During the past 12 months has [he/she] participated in any [out-of-school] group activities, such as scouting, church or temple youth group, or [nonschool] team sports like soccer, softball or baseball?</p> <p>1. YES, 2. NO, -7. REFUSED, -8. DON'T KNOW</p> <p>F7(G8). During the past 12 months has [YOUTH] done any volunteer or community service activities? This could include community service that is part of a [school class or other] group activity.</p> <p>1. YES, 2. NO, -7. REFUSED, -8. DON'T KNOW</p> <p>F8 (G9). During the past 12 months, about how many days a week did [YOUTH] usually get together with friends[outside of school and] outside of organized activities or groups. Would you say.....</p> <p>0. Never, 1. Sometimes, but not every week, 2. 1 day a week, 3. 2 or 3 days a week, 4. 4 or 5 days a week, 5. 6 or 7 days a week, -7. DON'T KNOW, -8.</p>

ECC Skill Area	Source, Question, Possible Answers and Coding
	REFUSED
	F9 (G10). During the past 12 months, has [he/she] been invited by friends to social activities like over to their home or to a party?
	1. YES, 2. NO. -7. REFUSED. -8. DON'T KNOW
	F10 (G11A). During the past 12 months, how often have [his/her] friends called [YOUTH] on the phone? Would you say...
	1. Never, 2. Rarely/less than once a month, 3. A few times a month, but not every week, 4. About once a week, 5. Several days a week, -7. REFUSED. -8. DON'T KNOW
	F12. About how many hours a week does [YOUTH] usually watch TV or videos? [ENTER ZERO IF YOUTH DOES NOT WATCH TV OR VIDEOS AT ALL] NUMBER() [S: 0-84; H: 0-112]
Independent Living	W1 Parent Survey
	F13. Does [YOUTH] get an allowance or have other money that [he/she] can decide how to spend? [IF NEEDED: This could include money earned from a job].
	1. YES, 2. NO, -7. REFUSED, -8. DON'T KNOW
	F14. Does [he/she] have a...
	[YES = 1, NO =2]
	A Saving account, B Checking account where [he/she] writes checks?, C Credit cards or charge accounts in [his/her] name?
	G3. How well does [YOUTH]...READ EACH ITEM ...on [his/her] own, without help? Would you say [he/she] does it very well, pretty well, not very well, or not at all well?
	[4=VERY WELL, 3=PRETTY WELL, 2=NOT VERY WELL, 1=NOT AT ALL WELL]
	A. Dress [himself/herself] completely, B. Feed [himself/herself] completely
	G4. How well does [YOUTH] do each of the following things on [his/her] own, without help?...READ STATEMENTS. CODE ONE RESPONSE FOR EACH. Would you say [he/she] does it very well, pretty well, not very well, or not at all well?
	[4=VERY WELL, 3=PRETTY WELL, 2=NOT VERY WELL, 1=NOT AT ALL WELL, 5= YOUTH NOT ALLOWED]
	a. Tell time on a clock with hands, b. Read and understand common signs, like Stop, Men, Women, or Danger, c. Count change, d. Look up telephone numbers in the phonebook and use the telephone, e. Get to places outside the home, like to school, to a nearby store or park, or to a neighbor's house
	G5. When the following chores need doing, about how often, on [his/her] own, does [he/she]... READ STATEMENTS. CODE ONE RESPONSE FOR EACH. Would you say always, usually, sometimes, or never?
	[4=ALWAYS, 3=USUALLY, 2=SOMETIMES, 1=NEVER]

ECC Skill Area	Source, Question, Possible Answers and Coding
	<p>a. Fix [his/her] own breakfast or lunch, b. Do laundry, c. Straighten up [his/her] own room or living area, d. Buy a few things at the store [he/she] needs</p>
	<p>W1 Program Survey D4. For this school year, what are the primary goals for this student? PLEASE MARK ALL THAT APPLY. Increase functional or life skills</p>
	<p>D9. The following questions focus on a specific special education class that this student takes, that is not prevocational or vocational education. If you teach this student in such a class, please use it to answer these questions. If you teach this student in more than one such class, please use the first class in the week. If you do not teach this student in such a class, please confer with the teacher of this student's first special education class during the week to answer these questions.</p>
	<p>What kind of special education class are you using to answer the following questions? (For questions D16 and D19) PLEASE MARK ONE BOX. A class focused on life skills (e.g., independent functioning)</p>
	<p>D16. Overall, which of the following best describes this student's performance in this class? PLEASE MARK ONE BOX. Grades are: Mostly As, Mostly As & Bs, Mostly Bs, Mostly Bs & Cs, Mostly Cs, Mostly Cs & Ds, Mostly Ds, Mostly Ds & Fs, Mostly Fs OR Performance is: Mostly "excellent", Mostly "good", Mostly "fair", Mostly "poor", Mostly "needs improvement", Mostly "satisfactory", Mostly "unsatisfactory", Mostly "passing", Mostly "failing"</p>
	<p>E6. How much progress do you believe this student is making toward each kind of goal for the transition to adulthood? PLEASE MARK ONLY ONE BOX ON EACH LINE. MARK "NOT APPLICABLE" IF THE STUDENT DOES NOT HAVE A PARTICULAR KIND OF GOAL. No progress, A little progress, Some progress, A lot of progress, Not applicable d. Independent living goals (e.g., personal management, getting a driver's license)</p>
<p>Self-determination</p>	<p>W1 Parent Survey E2B During this or last school year, did [YOUTH] go to a meeting about an Individualized Education Plan, or IEP, for [his/her] special education program or services? 1. YES, 2. NO. -7. REFUSED. -8. DON'T KNOW</p> <p>E3A (E3). Did the school mostly come up with the goals on [his/her] [IEP] [and] [transition plan] or was it mostly you and/or [YOUTH] who came up</p>

ECC Skill Area	Source, Question, Possible Answers and Coding
	<p>with the goals? [IF NEEDED: "IEP is an individualized education plan"] 1. Mostly school, 2. Mostly respondent and/or youth (include other adult household members here), 3. A combination of all of you together, 91. OTHER SPECIFY, DON'T KNOW ABOUT ANY GOALS, -7 REFUSED, -8. DON'T KNOW</p>
	<p>E3B. Which of the following best describes [YOUTH'S] role in [his/her] [IEP] [and] [transition planning]? 1. [He/She] was present in discussions but participated very little or not at all, 2. [He/She] provided some input, 3. [He/She] took a leadership role, helping set the direction of the discussions, goals and plans, 4. DON'T KNOW ABOUT ANY GOALS, -7 REFUSED, -8 DON'T KNOW</p>
	<p>W1 Program Survey D3. Which of the following are provided to this student as part of his/her IEP or 504 plan? <i>PLEASE MARK ALL THAT APPLY.</i> Self-advocacy training</p>
	<p>D4. For this school year, what are the primary goals for this student? <i>PLEASE MARK ALL THAT APPLY</i> Enhance skills for self-advocacy and self-determination</p>
	<p>E6. How much progress do you believe this student is making toward each kind of goal for the transition to adulthood? <i>PLEASE MARK ONLY ONE BOX ON EACH LINE. MARK "NOT APPLICABLE" IF THE STUDENT DOES NOT HAVE A PARTICULAR KIND OF GOAL.</i> No progress, A little progress, Some progress, A lot of progress, Not applicable g. Self-advocacy</p>
	<p>E9. Which of the following best describes this student's role in his or her transition planning. <i>PLEASE MARK ONE NUMBER.</i> This student has not attended planning meetings or participated in the transition planning process, This student has been present in discussions of transition planning, but participated very little or not at all, This student has provided some input into transition planning as a moderately active participant, This student has taken a leadership role in the transition planning process, helping set the direction of discussions, goals, and programs or service needs identified, Don't know</p>
<p>Academic Compensatory</p>	<p>W1 Parent Interview B3d (B5D). Does [YOUTH] use... [1 = YES, 2 = NO] a. Braille, b. Portable Braille note taker or writer, c. Large print type, d. Optical devices, such as near vision magnification, telescopic devices, or bioptic lenses, f. Assistive technology, such as voice synthesizers or software to enlarge the size of the print on the computer screen, g. Any other devices to help [him/her] see or read?</p>

ECC Skill Area	Source, Question, Possible Answers and Coding
	<p>H1A. During the past 12 months, has [YOUTH] received any of the following services? [YES =1, NO =2] m. Assistive technology services/devices, such as help getting/using any kind of equipment that helps people with a disability, such as a tape recorder or reading machine?</p>
	<p>W1 Teacher Survey B8. Which of the following, if any, are provided to this student to help him or her in this class? <i>PLEASE MARK ALL THAT APPLY.</i> Large print or Braille books or large print computer, Learning strategies/study skills assistance, Books on tape, Use of a calculator for activities not allowed other students (e.g., during tests), Communication aids (e.g., Touch Talker, manual printing board), Use of computer for activities not allowed other students (e.g., to produce work other students write, use of spell checker when other students do not use one), Computer software designed for students with disabilities, Computer hardware adapted for student's unique needs (e.g., alternative keyboards, switch interface)</p>
	<p>W1 Program Survey A3. Please indicate all the settings in which this student is now taking each subject listed below. (Some students may take a subject in multiple settings, such as in a general education classroom with resource room support.) <i>PLEASE MARK ALL THAT APPLY ON EACH LINE. MARK NOT APPLICABLE IF STUDENT DOES NOT TAKE A SUBJECT.</i> Special Education classroom, Individual instruction (e.g., home/hospital), Community Setting, Not applicable i. Study skills</p>
	<p>D3. Which of the following are provided to this student as part of his/her IEP or 504 plan? <i>PLEASE MARK ALL THAT APPLY.</i> Large print or Braille books or large print computer, Learning strategies/study skills assistance, Books on tape, Use of a calculator when not allowed other students (e.g., during tests), Communication aids (e.g., Touch Talker), Use of computer for when not allowed other students (e.g., use of spell checker when other students do not use one), Computer software designed for students with disabilities, Computer hardware adapted for student's unique needs (e.g., alternative keyboards, switch interface)</p>
	<p>D7. Which of the following services has been provided this student from or through the school system during this school year (including services the school contracted from other agencies). <i>PLEASE MARK ONE BOX ON EACH LINE.</i> o. Vision services (e.g., Braille instruction)</p>

Note. The included questions are exact replicates of questions from the NLTS2 wave 1 parent, teacher and program data collection instruments. Any changes made were in formatting only.

APPENDIX B

QOL Outcome Domains and NLTS2 Source, Question, and Possible Answers

Appendix B

QOL Outcome Domains and NLTS2 Source, Question, and Possible Answers

QOL Outcome Domain	NLTS2 Source, Question, and Possible Answers
Physical and mental health	<p>W2 Parent continuation Interview Part 2a</p> <p>B7a. Now, I have some questions about [YOUTH's] health. Would you say [his/her] general health is ... READ CATEGORIES. CODE ONE. Excellent 1, Very good 2, Good 3, Fair 4, Poor 5, DON'T KNOW -1, REFUSED -2</p>
	<p>B7b. Is [he/she] now taking any prescription medicine for a condition or problem related to [his/her] disability or special need? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
	<p>W2 Youth Continuation Interview Part 2b</p> <p>Q1. My next questions are about your health. Would you say your general health is ... READ CATEGORIES. CODE ONE. Excellent 1, Very good 2, Good 3, Fair 4, Poor 5, DON'T KNOW -1, REFUSED -2</p>
	<p>Q3. In the last month, how often did a health or emotional problem cause you to miss a social or recreational activity? Would you say ... READ CATEGORIES, CODE ONE RESPONSE. Never 1, Just a few times 2, About once a week 3, Almost every day 4, Every day 5, DON'T KNOW -1, REFUSED -2</p>
Food, clothing and lodging	<p>Q4a. Are you now taking any prescription medicine for a condition or problem related to a disability? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
	<p>W2 Parent continuation Interview Part 2a</p> <p>G3a. How well does [YOUTH] do each of the following things on [his/her] own, without help? READ STATEMENTS. CODE ONE RESPONSE FOR EACH. Would you say [he/she] does it very well, pretty well, not very well, not at all well? NOTE: IF YOUTH DOESN'T DO THE ACTIVITY, RESPONDENT SHOULD ANSWER BASED ON HOW WELL THEY THINK YOUTH COULD DO THE ACTIVITY. Very Well 4, Pretty Well 3, Not Very Well 2, Not At All Well 1, CHILD NOT ALLOWED 5, DK -1, RF-2</p> <p>g. Buy his/her own clothes at a store</p>
	<p>M7b. Does [he/she] now receive money from TANF (Temporary Assistance to Needy Families) or the state welfare program? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>

QOL Outcome Domain	NLTS2 Source, Question, and Possible Answers
	<p>M7d. Does [he/she] receive Food Stamps now? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
	<p>W2 Youth Continuation Interview Part 2b</p>
	<p>W3b. Do you receive money from TANF (Temporary Assistance to Needy Families) or the state welfare program now? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
	<p>W4b. Do you receive Food Stamps now? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
Financial security	<p>W2 Parent continuation Interview Part 2a</p>
	<p>H13b. Does [YOUTH] receive money from the Supplemental Security Income or SSI program now? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
	<p>J14a. Does [he/she] get an allowance or have other money that [he/she] can decide how to spend? IF ASKED, THIS COULD INCLUDE MONEY EARNED FROM A JOB. CODE ONE. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
	<p>J14b. Does [he/she] have a ... READ CATEGORIES, ONE CODE PER ITEM. YES 1, NO 2, DON'T KNOW -1, REFUSED -2 a. Savings account, b. Checking account where [he/she] writes checks, c. Credit cards or charge account in [his/her] name?</p>
	<p>M9a. Studies like these often group people according to income. Please tell me which group best describes YOUTH's total income in the last tax year, including salaries or other earnings, money from public assistance, retirement, and so on, before taxes. Was [his/her] income in the past year GO TO M9c \$25,000 or less 1, GO TO M9d More than \$25,000 2, DON'T KNOW -1, REFUSED -2</p>
	<p>M9b. In studies like these, households are sometimes grouped according to income. Please tell me which group best describes the total income of YOUTH and [his/her] spouse in the last tax year, including salaries or other earnings, money from public assistance, retirement, and so on, before taxes. Was their household income in the past year ... GO TO M9c \$25,000 or less 1, GO TO M9d More than \$25,000 2, DON'T KNOW -1, REFUSED -2</p>
	<p>M9c. Was it... READ CATEGORIES. CODE ONE CATEGORY. \$5,000 or less 1, \$5,001 to \$10,000 2, \$10,001 to \$15,000 3, \$15,001 to \$20,000 4, \$20,001 to \$25,000 5, DON'T KNOW -1, REFUSED -2</p>
	<p>M9d. Was it ... READ CATEGORIES. CODE ONE CATEGORY.</p>

QOL Outcome Domain	NLTS2 Source, Question, and Possible Answers
	<p>GO TO M9e \$50,000 or less 1, GO TO M9f More than \$50,000 2, DON'T KNOW -1, REFUSED -2</p> <p>M9e. Was it... READ CATEGORIES. CODE ONE CATEGORY. \$25,001 to \$30,000 1, \$30,001 to \$35,000 2, \$35,001 to \$40,000 3, \$40,001 to \$45,000 4, \$45,001 to \$50,000 5, DON'T KNOW -1, REFUSED -2</p> <p>M9f Was it ... READ CATEGORIES. CODE ONE CATEGORY. \$50,001 to \$55,000 1, \$55,001 to \$60,000 2, \$60,001 to \$65,000 3, \$65,001 to \$70,000 4, \$70,001 to \$75,000 5, Over \$75,000 6, DON'T KNOW -1, REFUSED -2</p> <p>W2 Youth Continuation Interview Part 2b</p> <p>P16. Do you have ... READ CATEGORIES; CODE ONE RESPONSE FOR EACH ITEM. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>a. An allowance or have other money that you can decide how to spend (IF ASKED, THIS COULD INCLUDE MONEY EARNED FROM A JOB), b. A savings account, c. A checking account where you write checks, d. A credit card or charge account in your own name.</p> <p>W6a. Studies like these often group people according to income. Please tell me which group best describes your total income in the last tax year, including salaries or other earnings, money from public assistance, retirement, and so on, before taxes. Was your income in the past year ... GO TO W6c \$25,000 or less 1, GO TO W6d More than \$25,000 2, DON'T KNOW -1, REFUSED -2</p> <p>W6b. In studies like these, households are sometimes grouped according to income. Please tell me which group best describes the total income of you and your spouse in the last tax year, including salaries or other earnings, money from public assistance, retirement, and so on, before taxes. Was their household income in the past year ... GO TO W6c \$25,000 or less 1, GO TO W6d More than \$25,000 2, DON'T KNOW -1, REFUSED -2</p> <p>W6c. Was it... READ CATEGORIES. CODE ONE CATEGORY. \$5,000 or less 1, \$5,001 to \$10,000 2, \$10,001 to \$15,000 3, \$15,001 to \$20,000 4, \$20,001 to \$25,000 5, DON'T KNOW -1, REFUSED -2</p> <p>W6d. Was it ... READ CATEGORIES. CODE ONE CATEGORY. GO TO M9e \$50,000 or less 1, GO TO M9f More than \$50,000 2, DON'T KNOW -1, REFUSED -2</p> <p>W6e. Was it... READ CATEGORIES. CODE ONE CATEGORY. \$25,001 to \$30,000 1, \$30,001 to \$35,000 2, \$35,001 to \$40,000 3, \$40,001 to \$45,000 4, \$45,001 to \$50,000 5, DON'T KNOW -1, REFUSED -2</p>

QOL Outcome Domain	NLTS2 Source, Question, and Possible Answers
Safety from harm	<p>W6f Was it ... READ CATEGORIES. CODE ONE CATEGORY. \$50,001 to \$55,000 1, \$55,001 to \$60,000 2, \$60,001 to \$65,000 3, \$65,001 to \$70,000 4, \$70,001 to \$75,000 5, Over \$75,000 6, DON'T KNOW -1, REFUSED -2</p> <p>W2 Youth Continuation Interview Part 2b V5. Do you usually feel safe in your neighborhood? Yes 1, No 2, DON'T KNOW -1, REFUSED -2</p>
Mobility and community access	<p>W2 Parent Continuation Interview Part 2b G3a. How well does [YOUTH] do each of the following things on [his/her] own, without help? READ STATEMENTS. CODE ONE RESPONSE FOR EACH. Would you say [he/she] does it very well, pretty well, not very well, not at all well? NOTE: IF YOUTH DOESN'T DO THE ACTIVITY, RESPONDENT SHOULD ANSWER BASED ON HOW WELL THEY THINK YOUTH COULD DO THE ACTIVITY. Very Well 4, Pretty Well 3, Not Very Well 2, Not At All Well 1, CHILD NOT ALLOWED 5, DK -1, RF-2 e. Get places outside the home, like to school, to a nearby store or park, or to a neighbor's house, f. Use public transportation to get around town, like a bus or taxi, h. Arrange a plane or train trip to go out of town</p> <p>M10. My next question is about household transportation. How difficult is it for YOUTH to get where [he/she] needs to go? Would you say it is ... READ CATEGORIES. CODE ONE. Very difficult 1, Somewhat difficult 2, Somewhat easy 3, Very easy 4, DON'T KNOW -1, REFUSED -2</p>
Vocation, career and employment	<p>W2 Youth Continuation Interview Part 2b W7. My next question is about household transportation. How difficult is it for you to get where you need to go? Would you say it is ... READ CATEGORIES. CODE ONE. Very difficult 1, Somewhat difficult 2, Somewhat easy 3, Very easy 4, DON'T KNOW -1, REFUSED -2</p> <p>W2 Parent Continuation Interview Part 2b L6a. At any time during the past 2 years, did [he/she] do any work for pay, other than work around the house? CODE ONE. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>L6b. How many paid jobs has [he/she] had altogether in the past 2 years? NUMBER ____, DON'T KNOW -1, REFUSED -2</p> <p>L6c. What is the longest time [he/she] worked at a particular job in the past 2 years? NUMBER ____, DAYS 1, WEEKS 2, MONTHS 3, YEARS 4, DON'T KNOW -1, REFUSED -2</p>

QOL Outcome NLTS2 Source, Question, and Possible Answers
Domain

L6d. How many paid jobs has YOUTH had since leaving high school?
NUMBER ____, DON'T KNOW -1, REFUSED -2,

L6e. What is the longest amount of time [he/she] has worked at a particular job since leaving high school?
NUMBER ____, DAYS 1, WEEKS 2, MONTHS 3, YEARS 4, DON'T KNOW -1, REFUSED -2

L7a. Does YOUTH have a paid job now, other than work around the house?
YES 1, NO 2, DON'T KNOW -1, REFUSED -2

L7b. How many different paid jobs does [he/she] have now?
NUMBER ____, DON'T KNOW -1, REFUSED -2
CHECKPOINT: IF L7b=1 [HAS ONE JOB] GO TO L8a.

L7c. Thinking about all the jobs [he/she] has, about how many hours a week does [he/she] usually work?
__ HOURS, DON'T KNOW -1, REFUSED -2

L7d. Taking all [his/her] jobs together, does [he/she] usually work full time or part time?
IF ASKED, FULL TIME IS 35 HOURS OR MORE PER WEEK.
FULL TIME 1, PART TIME 2, DON'T KNOW -1, REFUSED -2

L8b. About how many hours a week does [he/she] usually work at this job? IF RESPONDENT SAYS HOURS VARY, ASK FOR HOURS IN A TYPICAL WEEK. IF RESPONDENT CAN'T ANSWER IN GENERAL, ASK FOR HOURS IN THE MOST RECENT WEEK [HE/SHE] WORKED AT THIS JOB.
HOURS ____, DON'T KNOW -1, REFUSED -2

L8c. Does YOUTH usually work full time or part time? IF ASKED, FULL TIME IS 35 HOURS OR MORE PER WEEK.
FULL TIME 1, PART TIME 2, DON'T KNOW -1, REFUSED -2

IF T8b <35 OR T8c =2 (PART TIME), GO TO L8d. ELSE, GO TO L8e.

L8e. About how long has YOUTH had this job?
NUMBER ____, DAYS 1, NUMBER OF WEEKS 2, MONTHS 3, YEARS 4,
DON'T KNOW -1, REFUSED -2

L8f1. About how much is [he/she] paid at this job? PROBE IF IN DOUBT: Is that per hour? IF ASKED, WE WANT PAY BEFORE TAXES OR DEDUCTIONS. ENTER NUMBER AND/OR CODE ONE.
\$ ____, HOUR 1, WEEK 2, MONTH 3, YEAR 4, MINIMUM WAGE 0,
DON'T KNOW -1, REFUSED -2

QOL Outcome Domain	NLTS2 Source, Question, and Possible Answers
	<p>L8f2. About how many hours a week does (fill he/she) usually work at this job? NUMBER ____, DON'T KNOW -1, REFUSED -2</p>
	<p>W2 Youth Continuation Interview Part 2b</p> <p>T6a. At any time during the past 2 years, did you do any work for pay, other than work around the house? CODE ONE. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>T6b. How many paid jobs have you had altogether in the past 2 years? NUMBER ____, DON'T KNOW -1, REFUSED -2</p> <p>T6c. What is the longest time you have worked at a particular job in the past 2 years? ENTER NUMBER AND CODE METRIC. IF RESPONDENT INDICATES JOB WAS HELD "OFF AND ON," WE WANT THE LONGEST SINGLE PERIOD OF CONTINUOUS WORK. NUMBER ____, DAYS 1, WEEKS 2, MONTHS 3, YEARS 4, DON'T KNOW -1, REFUSED -2</p> <p>T6d. How many paid jobs have you had since leaving high school? NUMBER ____, DON'T KNOW -1, REFUSED -2,</p> <p>T6e. What is the longest amount of time you have worked at a particular job since leaving high school? NUMBER ____, DAYS 1, WEEKS 2, MONTHS 3, YEARS 4, DON'T KNOW -1, REFUSED -2</p> <p>T7a. Do you have a paid job now, other than work around the house? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>T7b. How many different paid jobs do you have now? NUMBER ____, DON'T KNOW -1, REFUSED -2,</p> <p>T7b=1 [HAS ONE JOB] GO TO T8a.</p> <p>T7c. Thinking about all the jobs you have, about how many hours a week do you usually work? HOURS ____, DON'T KNOW -1, REFUSED -2</p> <p>T7d. Taking all your jobs together, do you usually work full time or part time? IF ASKED, FULL TIME IS 35 HOURS OR MORE PER WEEK. FULL TIME 1, PART TIME 2, DON'T KNOW -1, REFUSED -2</p> <p>T8b. About how many hours a week do you usually work at this job? IF RESPONDENT SAYS HOURS VARY, ASK FOR HOURS IN A TYPICAL WEEK. IF RESPONDENT CAN'T ANSWER IN GENERAL, ASK FOR HOURS IN THE MOST RECENT WEEK HE/SHE WORKED AT THIS</p>

QOL Outcome Domain	NLTS2 Source, Question, and Possible Answers
	<p>JOB. HOURS ____, DON'T KNOW -1, REFUSED -2</p> <p>T8c. Do you usually work full time or part time? IF ASKED, FULL TIME IS 35 HOURS OR MORE PER WEEK. FULL TIME 1, PART TIME 2, DON'T KNOW -1, REFUSED -2</p> <p>IF T8b <35 OR T8c =2 (PART TIME), GO TO T8d. ELSE, GO TO T8e.</p> <p>T8e. About how long have you had this job? NUMBER ____, DAYS 1, NUMBER OF WEEKS 2, MONTHS 3, YEARS 4, DON'T KNOW -1, REFUSED -2</p> <p>T8f1. About how much are you paid at this job? PROBE IF IN DOUBT: Is that per hour? IF ASKED, WE WANT PAY BEFORE TAXES OR DEDUCTIONS. ENTER NUMBER AND/OR CODE ONE. \$ ____, HOUR 1, WEEK 2, MONTH 3, YEAR 4, MINIMUM WAGE 0, DON'T KNOW -1, REFUSED -2</p> <p>T8f2. About how many hours a week do you usually work at this job? NUMBER ____, DON'T KNOW -1, REFUSED -2</p>
Leisure and recreation	<p>W2 Parent Continuation Interview Part 2b</p> <p>J2. During the last 12 months, has [he/she] taken part in any [out-of-school] group activity, such as scouting, church or temple youth group, or nonschool team sports like soccer or softball? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>J12. About how many hours a week does [he/she] usually watch TV or videos? DOESN'T WATCH TV 0, NUMBER: __2, DON'T KNOW -1, REFUSED -2</p> <p>W2 Youth Continuation Interview Part 2b</p> <p>P4. About how many hours a week do you usually watch TV or videos? IF ASKED, THIS ALSO INCLUDES DVDs. WE WANT TOTAL WATCHING TIME. DOESN'T WATCH TV/VIDEOS 0, NUMBER: __ OF HOURS, DON'T KNOW -1, REFUSED -2</p> <p>P6. During the past 12 months, that is from (NAME CURRENT MONTH) 2002 until now, have you taken part in any [out-of-school] group activity, such as scouting, church or temple youth group, or nonschool team sports like soccer or softball? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
Personal relationships and social	<p>W2 Parent Continuation Interview Part 2b</p> <p>G1. I am going to read you a list of statements and I want you to tell me how often YOUTH acts this way. How often does YOUTH ... READ EACH ITEM</p>

QOL Outcome Domain	NLTS2 Source, Question, and Possible Answers
networks	<p>AND THEN ASK "Would you say Never, Sometimes, or Very Often?" CIRCLE THE APPROPRIATE CODE FOR EACH ITEM.</p> <p>Never 0, Sometimes 1, Very Often 2, Don't know -1, Refused-2</p> <p>a. Join group activities without being told to, b. Make friends easily, c. End disagreements with you calmly, d. Seem confident in social situations such as parties or group outings, e. Get into situations that are likely to result in trouble, f. Start conversations rather than waiting for others to start. [IF NEEDED: can include sign language, and other means of communication], g. Receive criticism well, h. Behave at home in a way that causes problems for the family, i. control temper when arguing with peers [IF NEEDED: with peers other than siblings]</p> <p>J6. During the past 12 months about how many days a week did [he/she] usually get together with friends [outside of school and] outside of organized activities or groups? OK TO READ CATEGORIES IF NEEDED. CODE ONE. NEVER 0, SOMETIMES, BUT NOT EVERY WEEK 1, 1 DAY A WEEK 2, 2 OR 3 DAYS A WEEK 3, 4 OR 5 DAYS A WEEK 4, 6 OR 7 DAYS A WEEK 5, DON'T KNOW -1, REFUSED -2,</p> <p>J7. During the past 12 months has he/she been invited to other kids' social activities like over to their home or to a party? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>J8. During the past 12 months how often have friends called YOUTH on the phone? Would you say ... READ CATEGORIES. CODE ONE. Never 1, Rarely/less than once a month 2, A few times a month, but not every week 3, About once a week 4, Several days a week 5, Every day 6, DON'T KNOW -1, REFUSED -2</p> <p>J10. How frequently does [YOUTH] use e-mail, instant messaging or take part in chat rooms? Would you say ... READ CATEGORIES. CIRCLE ONE CODE. Several times a day 1, Once a day 2, Several times a week 3, Once a week 4, Less often 5, DON'T KNOW -1, REFUSED -2</p> <p>M1. Does YOUTH have a partner or spouse living with [him/her] now? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>W2 Youth Continuation Interview Part 2b</p> <p>P10. During the past 12 months, about how many days a week did you usually get together with friends [outside of school and] outside of organized activities or groups? OK TO READ CATEGORIES IF NEEDED. CODE ONE. NEVER 0, SOMETIMES, BUT NOT EVERY WEEK 1, 1 DAY A WEEK 2, 2 OR 3 DAYS A WEEK 3, 4 OR 5 DAYS A WEEK 4, 6 OR 7 DAYS A WEEK 5, DON'T KNOW -1, REFUSED -2</p>

QOL Outcome Domain	NLTS2 Source, Question, and Possible Answers
	<p>P12. During the past 12 months, how often have friends called you on the phone? Would you say ... READ CATEGORIES. CODE ONE. Never 1, Rarely/less than once a month 2, A few times a month, but not every week 3, About once a week 4, Several days a week 5, Every day 6, DON'T KNOW -1, REFUSED -2</p> <p>P13b. How frequently do you use e-mail, instant messaging or take part in chat rooms. Would you say ... READ CATEGORIES, CODE ONE RESPONSE. Several times a day 1, Once a day 2, Several times a week 3, Once a week 4, Less often than that 5, DON'T KNOW -1, REFUSED -2</p> <p>W1a. Do you have a partner or spouse living with you now? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
Educational attainment	<p>W2 Parent Continuation Interview Part 2b</p> <p>D2e. Did [he/she] receive a regular high school diploma, a certificate of completion, or something else? DIPLOMA 1, CERTIFICATE 2, SOMETHING ELSE 3, DON'T KNOW -1, REFUSED -2</p> <p>D4a. Since leaving high school, has [he/she] gone to any of the following types of schools? READ CATEGORIES, CIRCLE ONE NUMBER IN EACH ROW. FOR EACH YES IN COLUMN A, GO IMMEDIATELY TO COLUMN B. AND ASK D4b.</p> <p>D4b. Is [he/she] going to a...READ SCHOOL TYPE now? READ CATEGORIES, CIRCLE ONE NUMBER IN EACH ROW. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>A. ATTENDED SINCE HIGH SCHOOL 1. Two year or community college, 2. Beyond high school level vocational, business or technical school, 3. A four year college</p> <p>B. ATTENDS NOW 1. Two year or community college, 2. Beyond high school level vocational, business or technical school, 3. A four year college</p> <p>School leavers only K5a-c</p> <p>K5a. Since leaving high school, has [he/she] taken classes or tests to earn a high school diploma, such as a GED course? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>K5b. Did [he/she] get a high school diploma or certificate from this effort? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>K5c. Is [he/she] taking classes to earn a high school diploma or certificate now? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>

QOL Outcome NLTS2 Source, Question, and Possible Answers
Domain

K6m2. Has YOUTH gotten a diploma, certificate, or license from a 2-year or community college?

YES 1, NO 2, DON'T KNOW -1, REFUSED -2

K6n. Is [he/she] working toward [IF K6m2 NE1: a] [IF K6m2=1: another] diploma, certificate, or license from this school?

YES 1, NO 2, DON'T KNOW -1, REFUSED -2

K7j2. Has YOUTH gotten a diploma, certificate, or license from a vocational, business, or technical school?

YES 1, NO 2, DON'T KNOW -1, REFUSED -2

K7l. Is YOUTH working toward [IF K7j2 NE 1: a] [IF K7j2 =1: another] diploma, certificate, or license from this work?

YES 1, NO 2, DON'T KNOW -1, REFUSED -2

K8k. Has YOUTH gotten a diploma, certificate, or license from a 4-year college or university?

YES 1, NO 2, DON'T KNOW -1, REFUSED -2

K8l. Is [he/she] working toward [IF K8k NE 1: a] [IF K8k=1: another] diploma, certificate, or license from this work?

YES 1, NO 2, DON'T KNOW -1, REFUSED -2

W2 Youth Continuation Interview Part 2b

S1a. My next questions are about high school. Did you graduate from high school?

YES 1, NO 2, DON'T KNOW -1, REFUSED -2

S2a. [IF IN HIGH SCHOOL IN PRECEDING WAVE OR (P2a=1 AND P2B NE 1): Since leaving high school] [IF ALREADY OUT OF HIGH SCHOOL IN PRECEDING WAVE: In the past 2 years], have you taken classes or tests to earn a high school diploma or certificate, such as a GED course?

YES 1, NO 2, DON'T KNOW -1, REFUSED -2,

S2b. Did you get a high school diploma or certificate?

YES 1, NO 2, DON'T KNOW -1, REFUSED -2

S2c. Are you taking classes to earn a high school diploma or certificate now?

YES 1, NO 2, DON'T KNOW -1, REFUSED -2

S3a. [IF IN HIGH SCHOOL IN PRECEDING WAVE OR (P2a=1 AND P2B NE 1: Since leaving high school] [IF ALREADY OUT OF HIGH SCHOOL IN PRECEDING WAVE: In the past 2 years], have you taken any classes from a 2-year, junior, or community college?

YES 1, NO 2, DON'T KNOW -1, REFUSED -2

QOL Outcome Domain	NLTS2 Source, Question, and Possible Answers
	<p>S3q. Have you gotten a diploma, certificate, or license from a 2-year or community college? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>S3r. Are you working toward [IF S3q NE 1 a] [IF S3q=1, another] diploma, certificate, or license from this school? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>S4a. [IF IN HIGH SCHOOL IN PRECEDING WAVE OR (P2a=1 AND P2B NE 1: Since leaving high school) [IF NOT IN HIGH SCHOOL IN PRECEDING WAVE: In the past 2 years], have you taken any classes from a vocational, business, or technical school? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>S4o. Have you gotten a diploma, certificate, or license from a vocational, business, or technical school? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>S4q. Are you working toward [IF S4o NE1 a] [IF S4o=1, another] diploma, certificate, or license from this work? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>S5a. [IF IN HIGH SCHOOL IN PRECEDING WAVE OR (P2a=1 AND P2B NE 1: Since leaving high school) [IF NOT IN HIGH SCHOOL IN PRECEDING WAVE: In the past 2 years], have you taken any classes from a 4-year-college or university? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>S5p. Have you gotten a diploma, certificate, or license from a 4-year college or university? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p> <p>S5q. Are you working toward [IF S5p NE 1, a] [IF S5p=1, another] diploma, certificate, or license from this work? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
Spiritual fulfillment	<p>W2 Parent Continuation Interview Part 2b J3a. What kinds of groups has [he/she] belonged during the past 12 months]? DO NOT READ. CODE ALL THAT APPLY. RELIGIOUS GROUP, RELIGIOUS YOUTH GROUP 2</p> <p>W2 Youth Continuation Interview Part 2b P7a. What kinds of groups have you belonged to during the past 12 months? DO NOT READ. CODE ALL THAT APPLY. RELIGIOUS GROUP, RELIGIOUS YOUTH GROUP 2</p>
Citizenship	<p>W2 Parent Continuation Interview Part 2b J16. Is YOUTH registered to vote? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>

QOL Outcome Domain	NLTS2 Source, Question, and Possible Answers
Social responsibility	<p>W2 Youth Continuation Interview Part 2b</p>
	<p>U9. Are you registered to vote? YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
	<p>W2 Parent Continuation Interview Part 2b</p>
	<p>J15a. My next few questions are about involvement with police and courts. Has YOUTH been arrested in the past 2 years? CODE ONE. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
	<p>J15b. In the past 2 years, has [he/she] been in jail overnight? CODE ONE. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
	<p>J15c. In the past 2 years, has [he/she] been on probation or parole? CODE ONE. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
	<p>J15d. In the past 2 years, has [he/she] been stopped and questioned by the police [IF G9=5 OR SAMPLE FILE INDICATES HAS DRIVERS LICENSE OR J13=1, HAS A DRIVER'S LICENSE OR PERMIT, ADD: except for a traffic violation]? CODE ONE. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
	<p>W2 Youth Continuation Interview Part 2b</p>
	<p>U8a. Have you been arrested at any time in the past 2 years? CODE ONE. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
	<p>U8b. In the past 2 years, have you been in jail overnight? CODE ONE. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>
<p>U8c. In the past 2 years, have you been on probation or parole? CODE ONE. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>	
<p>U8d. In the past 2 years, have you been stopped and questioned by the police [IF P15=1, HAS A DRIVER'S LICENSE OR PERMIT, ADD: except for a traffic violation]? CODE ONE. YES 1, NO 2, DON'T KNOW -1, REFUSED -2</p>	
Happiness	Not assessed
Satisfaction	<p>W2 Youth Continuation Interview Part 2b</p> <p>V2. During the last week, how often did you feel...? READ FIRST ITEM. Would you say never or rarely, sometimes, a lot of the time, or most or all of the time? CODE ONE RESPONSE. READ REMAINING ITEMS. CODE ONE RESPONSE FOR EACH ITEM. never or rarely 1, sometimes 2, a lot of the time 3, most or all of the time 4, DON'T KNOW -1, REFUSED -2 a. That you enjoyed life, b. Depressed, c. That people disliked you, d. Hopeful about the future, e. Lonely</p>

QOL Outcome Domain	NLTS2 Source, Question, and Possible Answers
Sense of general well-being	<p>W2 Youth Continuation Interview Part 2b</p> <p>V3. Please tell me how much each of the following is like you. READ FIRST ITEM. Would you say this is not at all like you, a little like you, or very much like you?</p> <p>not at all like you 1, a little like you 2, or very much like you 3, DON'T KNOW -1, REFUSED -2</p> <p>a. You are proud of who you are, b. You are a nice person, c. You can make friends easily, d. You can tell other people your age how you feel when they upset you or hurt your feelings, e. You feel useful and important, f. You feel your life is full of interesting things to do, g. You can handle most things that come your way, h. You know how to get the information you need.</p>

Note. The included questions are exact replicates of questions from the NLTS2 wave 2 parent/youth data collection instrument. Any changes made were in formatting only.

APPENDIX C

All Subsets Regression, Physical and Material Well Being

Appendix C

All Subsets Regression, Physical and Material Well Being

Number of Predictors	R ²	Variables in Model
1	0.1822	Academic Compensatory 2: Braille and Technology Use
1	0.1513	Independent Living 1: Completes Functional Skills
1	0.1480	Self-Determination: Student Action and Self-Advocacy Goals
1	0.0845	Assistive Technology 2: Electronic Braille Usage
1	0.0594	Career Education 3: Received Training or Counseling
1	0.0485	Orientation and Mobility: Independent Travel
1	0.0255	Academic Compensatory 1: Provision of Learning Strategies
1	0.0234	Career Education 1: Worked Off Campus
1	0.0203	Career Education 2: Worked On Campus
1	0.0192	Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
1	0.0092	Independent Living 2: Uses Environmental Information
1	0.0012	Social Interaction 1: Student Interaction with Others
1	0.0004	Assistive Technology 1: Services Provided and Devices Used
2	0.2176	Academic Compensatory 2: Braille and Technology Use, Self-Determination: Student Action and Self-Advocacy Goals
2	0.2155	Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals
2	0.2041	Academic Compensatory 2: Braille and Technology Use, Career Education 3: Received Training or Counseling
2	0.2011	Academic Compensatory 2: Braille and Technology Use, Social Interaction 1: Student Interaction with Others
2	0.1973	Academic Compensatory 2: Braille and Technology Use, Independent Living 1: Completes Functional Skills
2	0.1972	Academic Compensatory 2: Braille and Technology Use, Independent Living 2: Uses Environmental Information
2	0.1945	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used
2	0.1900	Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
2	0.1873	Academic Compensatory 2: Braille and Technology Use, Orientation and Mobility: Independent Travel
2	0.1849	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage
2	0.1839	Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
2	0.1833	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use
2	0.1829	Academic Compensatory 2: Braille and Technology Use, Career Education 1: Worked Off Campus

Number of Predictors	R ²	Variables in Model
3	0.2535	Academic Compensatory 2: Braille and Technology Use, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals
3	0.2472	Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals
3	0.2455	Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel
3	0.2426	Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling
3	0.2396	Academic Compensatory 2: Braille and Technology Use, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
3	0.2360	Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals
3	0.2343	Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
3	0.2307	Academic Compensatory 2: Braille and Technology Use, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling
3	0.2303	Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals
3	0.2284	Academic Compensatory 2: Braille and Technology Use, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
3	0.2265	Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals
3	0.2251	Academic Compensatory 2: Braille and Technology Use, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information
3	0.2248	Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals
4	0.2802	Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
4	0.2729	Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals
4	0.2682	Assistive Technology 1: Services Provided and Devices Used, Career

Number of Predictors	R ²	Variables in Model
4	0.2669	Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel
4	0.2668	Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals
4	0.2642	Academic Compensatory 2: Braille and Technology Use, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals
4	0.2614	Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals
4	0.2592	Academic Compensatory 2: Braille and Technology Use, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
4	0.2576	Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
4	0.2572	Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals
4	0.2560	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel
4	0.2555	Academic Compensatory 2: Braille and Technology Use, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals
4	0.2554	Academic Compensatory 2: Braille and Technology Use, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
4	0.2554	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals
5	0.2933	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
5	0.2907	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Social Interaction 1: Student Interaction with Others
5	0.2893	Academic Compensatory 2: Braille and Technology Use, Assistive

Number of Predictors	R ²	Variables in Model
5	0.2872	Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
5	0.2848	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
5	0.2828	Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
5	0.2820	Academic Compensatory 1: Provision of Learning Strategies, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals
5	0.2820	Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
5	0.2815	Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
5	0.2809	Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
5	0.2809	Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
5	0.2806	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals
5	0.2804	Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.2777	Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
6	0.3101	Academic Compensatory 1: Provision of Learning Strategies, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals, Social

Number of Predictors	R ²	Variables in Model
6	0.3092	Interaction 1: Student Interaction with Others Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
6	0.3051	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
6	0.3046	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Social Interaction 1: Student Interaction with Others
6	0.3023	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
6	0.3012	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.3010	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others
6	0.2985	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.2973	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
6	0.2972	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
6	0.2964	Academic Compensatory 1: Provision of Learning Strategies, Academic

Number of Predictors	R ²	Variables in Model
6	0.2963	Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Social Interaction 1: Student Interaction with Others
6	0.2954	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Social Interaction 1: Student Interaction with Others
7	0.3256	Academic Compensatory 1: Provision of Learning Strategies, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
7	0.3225	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
7	0.3221	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Social Interaction 1: Student Interaction with Others
7	0.3205	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
7	0.3204	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
7	0.3196	Academic Compensatory 1: Provision of Learning Strategies, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
7	0.3196	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Orientation and

Number of Predictors	R ²	Variables in Model
7	0.3180	Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others Academic Compensatory 1: Provision of Learning Strategies, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
7	0.3165	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
7	0.3157	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others
7	0.3156	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
7	0.3155	Academic Compensatory 1: Provision of Learning Strategies, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
7	0.3138	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
7	0.3129	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Social Interaction 1: Student Interaction with Others
8	0.3376	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2:

Number of Predictors	R ²	Variables in Model
8	0.3357	Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
8	0.3325	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
8	0.3316	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
8	0.3311	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
8	0.3305	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
8	0.3288	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.3281	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with

Number of Predictors	R ²	Variables in Model
		Others
8	0.3278	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others
8	0.3274	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
8	0.3268	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others
8	0.3258	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
8	0.3258	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.3407	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.3403	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses

Number of Predictors	R ²	Variables in Model
9	0.3398	Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
9	0.3390	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
9	0.3386	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
9	0.3376	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
9	0.3368	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.3366	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
9	0.3363	Academic Compensatory 1: Provision of Learning Strategies, Academic

Number of Predictors	R ²	Variables in Model
9	0.3359	Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
9	0.3357	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
9	0.3356	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.3345	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
10	0.3475	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.3417	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses

Number of Predictors	R ²	Variables in Model
10	0.3415	Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.3415	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.3412	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
10	0.3411	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.3406	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
10	0.3404	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1:

Number of Predictors	R ²	Variables in Model
10	0.3400	Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
10	0.3391	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
10	0.3389	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
10	0.3388	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.3386	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
11	0.3479	Academic Compensatory 1: Provision of Learning Strategies, Assistive

Number of Predictors	R ²	Variables in Model
11	0.3475	Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.3475	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.3422	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.3422	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
11	0.3421	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off

Number of Predictors	R ²	Variables in Model
11	0.3417	Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.3417	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
11	0.3415	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
11	0.3406	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.3389	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes

Number of Predictors	R ²	Variables in Model
11	0.3389	Functional Skills, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
11	0.3388	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.3480	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.3479	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.3476	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received

Number of Predictors	R ²	Variables in Model
12	0.3423	Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.3422	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
12	0.3389	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.3372	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.3358	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1:

Number of Predictors	R ²	Variables in Model
12	0.3342	Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.3286	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.3282	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.3278	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2:

Number of Predictors	R ²	Variables in Model
12	0.3188	Behavior of Students with Social Skills Goals on IEP Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
13	0.3481	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP

APPENDIX D

All Subsets Regression, Performance of Adult Roles

Appendix D

All Subsets Regression, Performance of Adult Roles

Number of Predictors	R ²	Variables in Model
1	0.4709	Independent Living 1: Completes Functional Skills
1	0.3842	Academic Compensatory 2: Braille and Technology Use
1	0.3675	Self-Determination: Student Action and Self-Advocacy Goals
1	0.2183	Assistive Technology 2: Electronic Braille Usage
1	0.0975	Academic Compensatory 1: Provision of Learning Strategies
1	0.0942	Orientation and Mobility: Independent Travel
1	0.0555	Career Education 3: Received Training or Counseling
1	0.0489	Career Education 2: Worked On Campus
1	0.0471	Career Education 1: Worked Off Campus
1	0.0404	Independent Living 2: Uses Environmental Information
1	0.0244	Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
1	0.0179	Social Interaction 1: Student Interaction with Others
1	0.0111	Assistive Technology 1: Services Provided and Devices Used
2	0.5377	Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
2	0.5079	Assistive Technology 2: Electronic Braille Usage, Independent Living 1: Completes Functional Skills
2	0.5069	Academic Compensatory 2: Braille and Technology Use, Independent Living 1: Completes Functional Skills
2	0.5061	Independent Living 1: Completes Functional Skills, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
2	0.4927	Academic Compensatory 2: Braille and Technology Use, Self-Determination: Student Action and Self-Advocacy Goals
2	0.4830	Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
2	0.4827	Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills
2	0.4827	Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills
2	0.4811	Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information
2	0.4800	Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills
2	0.4744	Academic Compensatory 1: Provision of Learning Strategies, Independent Living 1: Completes Functional Skills
2	0.4713	Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel
2	0.4710	Assistive Technology 1: Services Provided and Devices Used, Independent Living 1: Completes Functional Skills

Number of Predictors	R ²	Variables in Model
3	0.5710	Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals
3	0.5684	Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
3	0.5634	Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
3	0.5604	Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
3	0.5572	Academic Compensatory 2: Braille and Technology Use, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
3	0.5535	Assistive Technology 2: Electronic Braille Usage, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
3	0.5508	Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals
3	0.5497	Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
3	0.5488	Assistive Technology 1: Services Provided and Devices Used, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
3	0.5477	Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
3	0.5438	Academic Compensatory 1: Provision of Learning Strategies, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
3	0.5350	Assistive Technology 2: Electronic Braille Usage, Independent Living 1: Completes Functional Skills, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
3	0.5247	Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills
4	0.6018	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
4	0.5956	Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP

Number of Predictors	R ²	Variables in Model
4	0.5861	Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals
4	0.5854	Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals
4	0.5833	Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
4	0.5822	Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
4	0.5813	Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
4	0.5805	Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
4	0.5803	Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals
4	0.5795	Academic Compensatory 2: Braille and Technology Use, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
4	0.5792	Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals
4	0.5792	Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
4	0.5786	Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
5	0.6146	Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.6079	Career Education 3: Received Training or Counseling, Independent

Number of Predictors	R ²	Variables in Model
5	0.6071	Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.6034	Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
5	0.6031	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
5	0.6031	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals
5	0.6027	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
5	0.6024	Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.6021	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals
5	0.6021	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.6020	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
5	0.6020	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
5	0.6018	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others

Number of Predictors	R ²	Variables in Model
5	0.6008	Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.6157	Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.6153	Academic Compensatory 2: Braille and Technology Use, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.6151	Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.6149	Academic Compensatory 1: Provision of Learning Strategies, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.6147	Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.6147	Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.6147	Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.6147	Career Education 2: Worked On Campus, Career Education 3: Received

Number of Predictors	R ²	Variables in Model
6	0.6121	Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.6117	Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.6093	Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.6089	Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
6	0.6082	Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.6171	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.6168	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.6165	Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 1:

Number of Predictors	R ²	Variables in Model
7	0.6159	Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.6158	Academic Compensatory 2: Braille and Technology Use, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.6158	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.6158	Academic Compensatory 2: Braille and Technology Use, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.6157	Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.6157	Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.6156	Academic Compensatory 2: Braille and Technology Use, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.6156	Academic Compensatory 1: Provision of Learning Strategies, Academic

Number of Predictors	R ²	Variables in Model
7	0.6154	Compensatory 2: Braille and Technology Use, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.6154	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.6186	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.6179	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.6179	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.6178	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.6178	Academic Compensatory 2: Braille and Technology Use, Assistive

Number of Predictors	R ²	Variables in Model
8	0.6174	Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.6172	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.6172	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.6172	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.6171	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.6171	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.6170	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2:

Number of Predictors	R ²	Variables in Model
8	0.6168	Behavior of Students with Social Skills Goals on IEP Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.6167	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.6210	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.6198	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.6194	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.6193	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP

Number of Predictors	R ²	Variables in Model
9	0.6190	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.6190	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.6187	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.6186	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.6184	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.6184	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2:

Number of Predictors	R ²	Variables in Model
		Behavior of Students with Social Skills Goals on IEP
9	0.6183	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.6182	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.6181	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.6225	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.6211	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.6211	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling,

Number of Predictors	R^2	Variables in Model
10	0.6210	Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.6203	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.6201	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.6199	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.6198	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action

Number of Predictors	R ²	Variables in Model
10	0.6197	and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.6196	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.6195	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.6195	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.6194	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP

Number of Predictors	R ²	Variables in Model
11	0.6226	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.6225	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.6225	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.6216	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.6214	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP

Number of Predictors	R ²	Variables in Model
11	0.6211	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.6205	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.6203	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.6203	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.6203	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP

Number of Predictors	R ²	Variables in Model
		IEP
11	0.6201	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.6197	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.6196	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.6230	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.6227	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2:

Number of Predictors	R ²	Variables in Model
		Behavior of Students with Social Skills Goals on IEP
12	0.6226	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.6216	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.6205	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.6205	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.6196	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental

Number of Predictors	R ²	Variables in Model
12	0.6194	Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.6176	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.6156	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
12	0.6142	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.6103	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic

Number of Predictors	R ²	Variables in Model
12	0.5818	Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
13	0.6230	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP

APPENDIX E

All Subsets Regression, Personal Fulfillment

Appendix E

All Subsets Regression, Personal Fulfillment

Number of Predictors	R ²	Variables in Model
1	0.3239	Independent Living 1: Completes Functional Skills
1	0.2016	Social Interaction 1: Student Interaction with Others
1	0.1568	Academic Compensatory 2: Braille and Technology Use
1	0.1030	Career Education 1: Worked Off Campus
1	0.0942	Career Education 2: Worked On Campus
1	0.0806	Self-Determination: Student Action and Self-Advocacy Goals
1	0.0803	Assistive Technology 1: Services Provided and Devices Used
1	0.0607	Independent Living 2: Uses Environmental Information
1	0.0395	Academic Compensatory 1: Provision of Learning Strategies
1	0.0380	Orientation and Mobility: Independent Travel
1	0.0292	Assistive Technology 2: Electronic Braille Usage
1	0.0121	Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
1	0.0053	Career Education 3: Received Training or Counseling
2	0.3963	Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
2	0.3703	Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills
2	0.3668	Assistive Technology 1: Services Provided and Devices Used, Independent Living 1: Completes Functional Skills
2	0.3509	Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information
2	0.3425	Independent Living 1: Completes Functional Skills, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
2	0.3312	Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel
2	0.3303	Assistive Technology 2: Electronic Braille Usage, Independent Living 1: Completes Functional Skills
2	0.3286	Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills
2	0.3267	Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals
2	0.3267	Career Education 2: Worked On Campus, Orientation and Mobility: Independent Travel
2	0.3261	Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills
2	0.3242	Academic Compensatory 1: Provision of Learning Strategies, Independent Living 1: Completes Functional Skills
2	0.3240	Academic Compensatory 2: Braille and Technology Use, Independent Living 1: Completes Functional Skills
3	0.4312	Independent Living 1: Completes Functional Skills, Independent Living

Number of Predictors	R ²	Variables in Model
		2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others
3	0.4295	Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
3	0.4266	Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
3	0.4212	Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
3	0.4168	Assistive Technology 1: Services Provided and Devices Used, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
3	0.4083	Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
3	0.4035	Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
3	0.4005	Academic Compensatory 1: Provision of Learning Strategies, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
3	0.4002	Assistive Technology 2: Electronic Braille Usage, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
3	0.3980	Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
3	0.3963	Academic Compensatory 2: Braille and Technology Use, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
3	0.3937	Assistive Technology 1: Services Provided and Devices Used, Independent Living 1: Completes Functional Skills, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
3	0.3901	Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel
4	0.4525	Assistive Technology 1: Services Provided and Devices Used, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
4	0.4516	Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
4	0.4494	Assistive Technology 2: Electronic Braille Usage, Independent Living 1:

Number of Predictors	R ²	Variables in Model
4	0.4464	Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others
4	0.4463	Academic Compensatory 2: Braille and Technology Use, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others
4	0.4449	Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others
4	0.4399	Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others
4	0.4392	Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
4	0.4389	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
4	0.4381	Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others
4	0.4376	Assistive Technology 1: Services Provided and Devices Used, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
4	0.4374	Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
4	0.4367	Independent Living 1: Completes Functional Skills, Academic Compensatory 2: Braille and Technology Use, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.4845	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.4713	Academic Compensatory 2: Braille and Technology Use, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others,

Number of Predictors	R ²	Variables in Model
5	0.4629	Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Academic Compensatory 2: Braille and Technology Use, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others
5	0.4622	Academic Compensatory 2: Braille and Technology Use, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others
5	0.4611	Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others
5	0.4607	Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.4606	Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.4602	Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.4594	Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.4593	Academic Compensatory 2: Braille and Technology Use, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.4587	Academic Compensatory 2: Braille and Technology Use, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.4585	Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
5	0.4578	Assistive Technology 1: Services Provided and Devices Used, Career

Number of Predictors	R ²	Variables in Model
		Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.4967	Academic Compensatory 2: Braille and Technology Use, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.4945	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.4942	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.4885	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.4885	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.4872	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.4869	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.4848	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on

Number of Predictors	R ²	Variables in Model
		IEP
6	0.4847	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Independent Living 1: Completes Functional Skills, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.4833	Academic Compensatory 2: Braille and Technology Use, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
6	0.4798	Academic Compensatory 2: Braille and Technology Use, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.4788	Academic Compensatory 2: Braille and Technology Use, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
6	0.4782	Academic Compensatory 2: Braille and Technology Use, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.5051	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.5047	Academic Compensatory 2: Braille and Technology Use, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.5036	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
7	0.5033	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive

Number of Predictors	R ²	Variables in Model
7	0.5015	Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.5014	Academic Compensatory 2: Braille and Technology Use, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.4992	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.4990	Academic Compensatory 2: Braille and Technology Use, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.4984	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.4973	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.4972	Academic Compensatory 2: Braille and Technology Use, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
7	0.4968	Academic Compensatory 2: Braille and Technology Use, Assistive

Number of Predictors	R ²	Variables in Model
7	0.4965	Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Academic Compensatory 2: Braille and Technology Use, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others
8	0.5089	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.5081	Academic Compensatory 2: Braille and Technology Use, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
8	0.5077	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
8	0.5075	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.5071	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.5069	Academic Compensatory 2: Braille and Technology Use, Career

Number of Predictors	R ²	Variables in Model
8	0.5060	Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.5059	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.5058	Academic Compensatory 2: Braille and Technology Use, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
8	0.5058	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.5058	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
8	0.5057	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
8	0.5056	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others, Social Interaction 2:

Number of Predictors	R ²	Variables in Model
8	0.5056	Behavior of Students with Social Skills Goals on IEP Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.5147	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
9	0.5143	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.5128	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
9	0.5118	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.5109	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP

Number of Predictors	R ²	Variables in Model
9	0.5103	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.5101	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
9	0.5101	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.5101	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.5101	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
9	0.5098	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP

Number of Predictors	R ²	Variables in Model
9	0.5097	Academic Compensatory 2: Braille and Technology Use, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
9	0.5095	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others
10	0.5165	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.5164	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
10	0.5162	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.5161	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy

Number of Predictors	R ²	Variables in Model
10	0.5153	Goals Social Interaction 1: Student Interaction with Others Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
10	0.5152	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.5150	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.5148	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.5144	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
10	0.5143	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3:

Number of Predictors	R ²	Variables in Model
10	0.5142	Received Training or Counseling, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
10	0.5136	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
10	0.5136	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
11	0.5187	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
11	0.5178	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.5175	Academic Compensatory 2: Braille and Technology Use, Assistive

Number of Predictors	R ²	Variables in Model
11	0.5175	Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.5171	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.5168	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
11	0.5166	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
11	0.5166	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.5166	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On

Number of Predictors	R ²	Variables in Model
11	0.5166	Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.5163	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.5160	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.5160	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
11	0.5157	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic

Number of Predictors	R ²	Variables in Model
		Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
12	0.5198	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.5191	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others
12	0.5189	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.5187	Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.5182	Academic Compensatory 1: Provision of Learning Strategies, Academic

Number of Predictors	R ²	Variables in Model
12	0.5176	Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.5169	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.5161	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.5133	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social

Number of Predictors	R ²	Variables in Model
12	0.5128	Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.5028	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.4964	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
12	0.4825	Academic Compensatory 1: Provision of Learning Strategies, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP
13	0.5206	Academic Compensatory 1: Provision of Learning Strategies, Academic Compensatory 2: Braille and Technology Use, Assistive Technology 1: Services Provided and Devices Used, Assistive Technology 2: Electronic Braille Usage, Career Education 1: Worked Off Campus, Career Education 2: Worked On Campus, Career Education 3: Received

Number of Predictors	R ²	Variables in Model
		Training or Counseling, Independent Living 1: Completes Functional Skills, Independent Living 2: Uses Environmental Information, Orientation and Mobility: Independent Travel, Self-Determination: Student Action and Self-Advocacy Goals Social Interaction 1: Student Interaction with Others, Social Interaction 2: Behavior of Students with Social Skills Goals on IEP