

Examining the Career Interests of High School Students with Disabilities

by

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Abstract

Individuals with disabilities are faced with many factors that impact their post-school career options. Participants in this study (n = 64) were students with disabilities who enrolled in career-focused transition programs in a high school in southeast Alabama. This study examined participants' results gained from completion on Holland's Self Directed Search career interest inventory. The purpose of this study was to determine whether there are significant correlations among participants' age, race, gender, disability type, and number of discipline referrals in relationship to their first letter of the Holland code. Statistically significant relationships and mean differences were identified between race and first letter Holland Code, more specifically, African American students were more likely to identify with careers in the realistic domain.

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Table of Contents

Abstract.....	ii
Acknowledgements.....	iii
List of Tables.....	ix
List of Figures.....	x
Chapter I. Introduction.....	1
Acronyms.....	1
Definition of Terms.....	2
History of Special Education in the United States.....	3
Special Education Law.....	4
Statement of the Problem.....	19
Purpose of the Study.....	20
Research Questions.....	20
Chapter II. Review of Literature.....	21
Introduction.....	22
Mild Disabilities.....	22
Disproportionality and Disability.....	25
African Americans and Disabilities.....	30
Behavior as a Result of Disabilities or Students Identified as At-Risk.....	33
High School Students with Disabilities and Transition.....	34
Career Development and Transition in High Schools.....	36
Career Interests and High School Students with Disabilities.....	39

Super’s Career Development Growth Stages.....	41
Holland’s Self Directed Search and Career Exploration.....	44
Implications on Transition Outcomes.....	52
Chapter III. Methodology.....	55
Methods.....	55
Research Questions.....	55
Participants.....	56
Study Setting.....	57
Research Design and Rationale.....	57
Data Collection.....	58
Materials and Equipment.....	58
Data Analysis and Procedures.....	60
Protection of Human Subjects.....	61
Chapter IV Results.....	62
Data Analysis Results	64
Research Question 1.....	65
Research Question 2.....	65
Research Question 3.....	65
Research Question 4.....	66
Research Question 5.....	66
Research Question 6.....	67
Research Question 7.....	68
Research Question 8.....	68

Research Question 9.....	68
Research Question 10.....	69
Chapter V. Discussion.....	70
Discussion	70
Limitations.....	78
Sample Size.....	78
Participant Demographics.....	78
Study Design.....	78
Future Research	78
Conclusion and Implications for Practice.....	81
References.....	82
Appendix A	95
Appendix B	96
Appendix C	97

List of Tables

Table 1 Important History in Disability Education.....	15
Table 2 Demographics of Participants	63
Table 3 Discipline Referrals of Participants.....	64
Table 4 Correlations Among Study Variables	67

List of Figures

Super's Life Stage Rainbow.....	42
Holland's Hexagon.....	46

Chapter I. Introduction

The field of special education involves many complex issues that are often discussed using acronyms. These acronyms can make navigating special education related documentation extremely difficult if one is not familiar with the vernacular.

Many of the thirteen disability categories included in The Individuals with Disabilities Education Act of 2004 (IDEA, 2004) are often referred to by acronyms, in addition to the acronyms associated with specific disabilities, there are also many other acronyms commonly used in the field of special education, including:

Autism Spectrum Disorders (ASD)

Behavior Intervention Plan (BIP)

Deaf-Blindness (D-B),

Emotional Disturbance (ED)

Free Appropriate Public Education (FAPE)

Functional Behavior Assessment (FBA)

Hearing Impairment (HI)

Individualized Education Program (IEP)

Individual Family Service Plan (IFSP)

Individuals with Disabilities Education Act (IDEA)

Intellectual Disability (ID)

Least Restrictive Environment (LRE)

Orthopedic Impairment (OI)

Other Health Impairment (OHI)

Attention Deficit Disorder (ADD)

Attention-Deficit Hyperactivity Disorder (ADHD)

Positive Behavior Supports (PBS)

Response to Intervention/Instruction (RTI)

Specific Learning Disability (SLD),

Speech or Language Impairment (SLI)

Traumatic Brain Injury (TBI)

Visual Impairment (VI)

(IDEA, 2004; Sorenson & Keith, 2010)

IDEA mandates that students who are identified in one or more of thirteen disability categories receive specialized instruction as defined by the law. These categories include; Autism, Deaf-blindness, Deafness, Developmental delay, Emotional disturbance, Hearing impairment, Intellectual disability, Multiple disabilities, Orthopedic impairment, Other health impairment, Specific learning disability, Speech or language impairment, Traumatic brain injury, Visual impairment, including blindness (Altshuler & Kopels, 2003). In addition to listing the 13 major disability categories, the federal government provides detailed definitions for each. Acronyms not directly associated with disability categories are often used to describe vital aspects in the field of special education; selected acronyms are identified and defined as follows:

Behavior Intervention Plan (BIP): A plan required by IDEIA for students with disabilities who exhibit behaviors deemed problematic; a proactive approach that includes a functional behavioral assessment and the use of positive behavior supports.

Free Appropriate Public Education (FAPE): The education that a student with a disability is entitled to under IDEA; students with disabilities are required to be provided

with an education that is Free, Appropriate for their developmental level, in a public school.

Functional Behavioral Assessment (FBA): A behavioral process that seeks to determine the purpose or function that a particular behavior serves-what is occasioning and maintaining the behavior.

Individuals with Disabilities Education Improvement Act (IDEIA): The United States special education law. IDEA is a federal law that guarantees all children with disabilities access to a free and appropriate public education.

Individualized Education Program (IEP): A written detailed plan developed by a team for each student ages 3-21 who receives special education services.

Individual Family Service Plan (IFSP): A written plan developed by a team that coordinates services for infants, toddlers, and their families (ages 0-3 years).

Positive Behavior Supports (PBS): An alternative approach to punishment; a school wide, proactive way of addressing problematic behaviors.

Response to Intervention/Instruction (RTI): A model used for determining whether a student has a disability. The student is exposed to increasing levels of validated instructional intervention; responsiveness to the instruction is assessed to determine if a student should be referred for special education services.

(Gargiulo, 2015; IDEIA, 2004; Sorenson & Keith, 2010)

History of Special Education in the United States

Individuals with disabilities have only in the last four and a half decades been provided with the rights and accommodations needed to level the playing field between them and their peers without disabilities. Legislation to support individuals with disabilities began to be enacted

during the 1970s which proved to be a turning point in the way America viewed the abilities of those with disabilities (Martin, Martin, & Terman, 1996). Prior to the 1970s individuals with disabilities were provided with little support and were typically seen as having little potential and were not provided with needed resources for success (Burch & Sutherland, 2006). Individuals with severe disabilities or those who were “distractions” in the classroom were typically removed from the general classroom setting and placed in separate educational settings with no opportunity to interact with their peers without disabilities (Burch & Sutherland, 2006). The way individuals with disabilities were viewed began to change during the early 1970s when several seminal laws would forever change the educational experiences of students with disabilities in the United States (Aron, 2012). These laws included Section 504 of the Rehabilitation Act, P.L. 93-380 and Education Amendments of 1974, The Education for All Handicapped Children Act of 1975 (EAHCA), The Individuals with Disabilities Education Act of 1990, The 1986 reauthorization of EAHCA, The Individuals with Disabilities Education Act Amendments of 1997, and the reauthorization of Individuals with Disabilities Education Improvement Act in 2004. The following section provides an overview of each of these seminal laws/legislation and the impact each made on public education.

Section 504 of the Rehabilitation Act of 1973

Section 504 is recognized as the civil rights declaration for individuals with disabilities. The legislation was seen by individuals with disabilities as the first step toward gaining the same access as counterparts without disabilities experienced. Section 504 of the Rehabilitation ACT of 1973 was the first major piece of legislation that sought to protect individuals with disabilities against discrimination based on their disabilities (Albrecht, 2005). The Rehabilitation Act was designed to provide federal assistance for rehabilitation programs that served individuals with

disabilities. Twice President Nixon vetoed the law in 1972 due to concerns that funding the legislation would be problematic. The following year it was rewritten and passed. The Act was signed into law on September 26, 1973, by then-President Richard Nixon (Albrecht, 2005).

Section 504 was written in the same language as Title VI of the Civil Rights Act of 1964 which prohibited discrimination based on race and national origin, and Title IX of the Education Amendments of 1972 which prohibiting discrimination based on gender (Yell & Katsiyannis, 2004). The ambiguity of the language made it unclear which protections were extended to individuals with disabilities through the statute. Due to issues with the language of the legislation, there was considerable confusion as to the true purpose of the statute. Many understood Section 504 as a correction to issues with the rehabilitation of persons with disabilities, while some saw the law as an extension of the Civil Rights Act of 1964 (Yell, Rogers, & Lodge Rodgers 1998). Congress' failure to include any formal means of eliminating disability discrimination in the language of Section 504, the law was not a strong civil rights statute (Albrecht, 2005).

The primary purpose of Section 504 was to prohibit discrimination against a person with a disability by any agency receiving federal funds. These agencies are any that receive funds, personnel services, and property interests, whether receiving these benefits directly or through another recipient. Section 504 requires agencies that are the recipients of federal financial assistance to provide assurances of compliance, to take corrective steps when violations are found, and to make individualized modifications and accommodations to provided services that are comparable to those offered persons without disabilities (Aron & Loprest, 2012).

Section 504 and Public School Implementation

As previously discussed, Section 504 of the Rehabilitation Act was designed as a means to prevent discrimination against individuals with disabilities by any organization that receives federal funding. The legislation has become an integral part of the public school system in the United States due to broader standards for inclusion than those of IDEA (Smith, 2001). Section 504 defines a disability as;

1. Has a physical or mental impairment that substantially limits one or more of such person's major life activities,
2. Has a record of such an impairment
3. Is regarded as having such an impairment

(Section 504 of the Rehabilitation Act of 1973, 34 C.F.R. Part 104)

Although there is a broader interpretation for what qualifies a student for services under Section 504, there are also guidelines as to what allows a student to qualify for services and what does not. The language is written to say that a person must be “otherwise qualified” to complete the activity in question, meaning, a person must possess the ability with reasonable accommodations and cannot be excluded solely based on their disability. An example provided by Smith (2001) is a student who has a diagnosis of Attention Deficit Disorder and Asthma who tries out for the basketball team but lacks all athletic skills necessary to compete would not be deemed “otherwise qualified” therefore would not be entitled to protection under Section 504. The provision of services to individuals with disabilities in public schools set forth by section 504 of the Rehabilitation act laid the foundation for the development of future legislation that proved to be an integral aspect of education for students with disabilities beginning with P.L. 93-30 and the education amendments of 1974 (Zirkel & Weathers, 2015).

P.L. 93-380 and Education Amendments of 1974

The Education Amendment of P.L. 93-380 was an amendment to the Elementary and Secondary Education Act (ESEA) of 1965. The ESEA provided federal funding for programs for children with disabilities in public schools. ESEA was also the legislation that created the Bureau of Education for the Handicapped and the National Advisory Council on Handicapped Children, now known as the Office of Special Education Programs (OSEP) and the National Institute for Disability and Rehabilitation Research respectively. The National Institute for Disability and Rehabilitation Research and OSEP have since been combined into the Office of Special Education and Rehabilitative Services (OSERS). The 1974 amendments required that any state that received federal special education funding to work towards a goal of providing full educational opportunities for all children with disabilities (Martin, Martin, & Terman, 1996).

P.L. 93-380 was a significant piece of legislation for children with disabilities. The amendment provided students with disabilities with a legal right to an education comparable to that of their peers without disabilities. It also provided funds for programs for the education of students with disabilities under Title IV-B, provided for due process procedures, and discussed the least restrictive environment (Hutchings, 2009). The legislation is widely regarded as the first step towards students with disabilities receiving the proper education that they were entitled to and a precursor to the Education for All Handicapped Children Act discussed in the next section. Although the legislation can be viewed as nothing other than a positive, it failed to address all potential issues regarding the education of individuals with disabilities. While P.L. 93-380 contained provisions for the education of students with disabilities, unfortunately, there were very few teachers who were trained to work with individuals with disabilities (LaNear & Frattura, 2007).

The Education for All Handicapped Children Act of 1975 (EAHCA)

The Education for All Handicapped Children Act (EAHCA), or P.L. 94-142, was a landmark act that provided states with funding specifically for the education of students with disabilities. The legislation required that any states receiving federal funding submit a state plan describing policies and procedures regarding the education of students with disabilities to the Bureau of Education for the Handicapped. In order to receive funding from the federal government the plan had to be approved which in turn served as an agreement to provide appropriate education services to individuals with disabilities Education for All Handicapped Children Act. The mandates outlined in P.L. 94-142 took effect on August 23, 1977. These mandates included the following rights for students with disabilities: (1) nondiscriminatory testing, evaluation, and placement procedures; (2) education occurring in the least restrictive environment; (3) procedural due process in which the parent(s) were involved; (4) free education; and (5) appropriate education. EAHCA introduced the Individualized Education Program (IEP) as the major document that drives all special education services received by students with disabilities (Education for All Handicapped Children Act. (1975). Public Law 94-142)

According to PL-94-142, the IEP is developed annually and includes annual goals for the student, educational placement, length of the school year, and evaluation and measurement procedures. Each of these components is developed in the IEP meeting which must include the parent or guardian of the student with a disability, the special education case manager, a local education agency representative, someone who can interpret the results of any evaluations, and the student whenever possible. EAHCA dictated that an IEP must be developed for each student with a disability enrolled in a public school. EAHCA outlined the rights of students with disabilities and provided federal funding to states specifically for the education of students with

disabilities. The funding provided under the law was supplemental to state and local funding for special education and could not be used to supplant the funding already in place. The law also required that a minimum of 75% of federal special education funding be allocated directly to the local school districts (Yell, Rogers, & Lodge Rodgers, 1998). Since the original landmark legislation in 1975, the EAHCA has been reauthorized. The major reauthorizations are described in the next section.

1986 Reauthorization of EAHCA

The reauthorization EAHCA by congress in 1986 extended the provisions of the original legislation to preschool-age children, 3-5 years old. The Handicapped Infants and Toddlers section of the legislation created a program intended to help states plan, develop, and implement a statewide interagency system of early intervention for infants and toddlers with disabilities from birth to age 3 years. The legislation also provided funding for each state based on the US census data indicating the number of infants and toddlers who reside in a state (Bruder, 2010).

This legislation also provided a definition for infants and toddlers with disabilities. The term included children from birth through age 2 who required early intervention services because they (a) are experiencing developmental delays, as measured by appropriate diagnostic instruments and procedures in one or more of the following areas: cognitive development, physical development, language, and speech development, psychosocial development, or self-help skills, or (b) have a diagnosed physical or mental condition that has a high probability of resulting in developmental delay (Handicapped Children's Protection Act of 1986, P-L 99-372, 20 U.S.C. [section] 1415 (1986).

The Individuals with Disabilities Education Act of 1990

In 1990 congress amended P.L. 94-142 and changed the name from the Education for All Handicapped Children act to the more empowering person first title, the Individuals with Disabilities Education Act (IDEA). IDEA included changes to P.L. 94-142 included the aforementioned name change that emphasized the person-first language, as well as changing the terminology contained in the law from handicapped student and handicapped to child with a disability, student with a disability, and person with a disability. IDEA also included the identification of autism and traumatic brain injury as separate disability categories bringing the total number of disability categories in education to 13. The law also mandated that a student's transition from high school must be addressed in a student's IEP that will be in effect when the student reaches the age of 16 (IDEA, 1990).

IDEA (1990) also required Local Education Agencies (LEA) to determine and place individuals with disabilities in their least restrictive environments (LRE). The law mandated that each state develop and implement procedures ensuring that students with disabilities are placed in educational settings with students without disabilities to the maximum extent possible (Yell & Katsiyannis, 2004). The law also stated that special (self-contained) classes, separate facilities, or any other removal from the general education environment should only take place only when a student's disability is severe enough to warrant removal from the general education setting, even with special education services or supplementary aides. The LRE provisions contained in IDEA extended to students in private schools or other private or public facilities, not just students served in public schools (Osborne Jr., & Dimattia, 1994). During the 1980s and 1990s, there were many court cases challenging IDEA and its policy of inclusion and, particularly, how the IDEA's mainstreaming policy affected school violence and the learning environment of classrooms. Both issues stirred much debate and controversy; many parents, educators, and

legislators believed a school's ability to discipline a disruptive child directly conflicted with the IDEA's preferences for students with disabilities (Jensen, 1996). Despite minor changes to the IDEA during the 1990s, Congress did not address the issue of discipline until the 1997 reauthorization. The reauthorization of 1997 and how it impacted the discipline of students with disabilities will be explored in the following section.

The Individuals with Disabilities Education Act Amendments of 1997

The Individuals with Disabilities Education Act Amendments of 1997, P.L. 105-17, was signed into law on June 4, 1997, by President Bill Clinton. This law amended and reauthorized the IDEA from 1990. Although the initial law was recognized as providing greater accessibility to schools for students with disabilities the major issue addressed in the 1997 reauthorization improving the educational performance achievement of students with disabilities.

The 1997 Reauthorization recognized the need for students with disabilities to work towards the general education curriculum when appropriate. Congress mandated changes to the IEP including the requirement that a statement of measurable annual goals that would allow parents and teachers to determine a student's progress be included in the IEP. The 1997 reauthorization also provided mandates regarding the inclusion of students with disabilities in assessments at the district and state level. Congress also attempted to encourage parents and schools to address issues through less adversarial means in order to streamline the process so that students would receive the services they need to be successful by including mediation as an option prior to filing a due process claim (Wolfe & Harriott, 1998).

One of the more significant additions to the 1997 reauthorization concerned the discipline of students with disabilities. The law prohibited schools from expelling students with disabilities, with the clarification that a student with a disability could be placed in an alternative

setting if they were deemed a danger to themselves or others (Yell, & Rozalski, 2008). The law was written to protect the rights of students with disabilities to free and appropriate public education (FAPE) while making it a more streamlined process for schools to remove students who were a danger to themselves or other students from their current educational setting. There was also a greater responsibility of the IEP team to devise and implement written behavioral plans in order to address behavioral issues. The 1997 reauthorization also mandated that a manifestation determination be held to determine whether a child's behavior is a manifestation of their disability (Valente & Valente, 2005).

The law stated that school officials were permitted to discipline a student with disabilities in the same way in which they would discipline a student without disabilities in most, but not all situations, if the rule infraction was not a manifestation of the student's disability. School officials are permitted to unilaterally change the educational placement of a student for discipline purposes to an appropriate short-term alternative setting, a separate setting, or they are permitted to suspend the student with a disability for the same period of time that they would students without disabilities. The notable difference between suspension of students with disabilities and those without disabilities is that the suspension or placement change may not exceed 10 school days. Exceptions to the 10-day rule include the ability of school officials to place a student with disabilities in an appropriate interim alternative educational setting for a period of no more than 45 days if the student brings a weapon on school grounds or possesses, uses, or sells illegal drugs on school grounds (Yell, & Rozalski, 2008). Although public schools are allowed to remove a student with a disability from their IEP determined setting for the aforementioned reasons, the IEP team still must determine the alternative educational setting. The law also stated that a hearing officer could order a change in placement for a period of 45 days if school officials have

substantial evidence that the student with a disability is likely to injure themselves or others if the current setting is maintained and if school officials have made reasonable efforts to minimize these risks (Dickinson & Miller 2006; Gable, Butler, Walker-Bolton, Tonelson, Quinn, & Fox, 2003; Goran, & Gage, 2011; Sullivan, Van Norman, & Klingbeil, 2014,).

IDEA 2004 Reauthorization

IDEA was once again reauthorized in 2004. The law was finally passed in November 2004 and signed by President Bush in December 2004 (Council for Exceptional Children, The Individuals with Disabilities Education Improvement Act (2004), contained some significant changes for the education of individuals with disabilities in public schools. IDEA 2004 included a requirement that special education teachers be “highly qualified” as mandated in the No Child Left Behind Act legislation. This was the first reauthorization of IDEA that included specific requirements related to teacher qualifications. Until this, determining the qualifications of teachers had always been left to the states. IDEA 2004 required teachers to be “highly qualified.” Being identified as a “highly qualified” teacher in the field of special education means that teachers must have a state special education certification, not hold an emergency, temporary, or provisional certification, and have at least a bachelor’s degree. The law also stated that special education teachers who teach specific content areas must meet the same standards as general education teachers who teach the same subjects (IDEA, 2004).

IDEA 2004 also provided for flexibility in attendance at IEP meetings. The law permitted team members not to attend if their area of expertise is not needed, as agreed by other team members, and not to attend if they provide written information related to the IEP meeting prior to the meeting, again with team approval. The legislation also stated that IEPs could be modified during the year without the entire team being present if the school and parents agree to a written

amendment after the original IEP is developed. IDEA 2004 also provided school systems the ability to collect attorney's fees following due process hearings in some circumstances which was previously not an option under prior legislation (IDEA, 2004).

IDEA 2004 also made changes to the disciplinary procedures for students with disabilities. Just as in IDEA 1997, before a student with a disability cannot be suspended or expelled for a cumulative period of more than 10 days without a manifestation determination. If it is determined that the behavior was not a result of the student's disability the school is permitted to suspend or expel the student just as they would a student without disabilities. If there is a relationship between the disability and the behavior, the student with a disability may not be expelled or suspended. A relationship is found if the behavior was caused by or had a direct and substantial relationship to the child's disability, or if the school had failed to implement the child's IEP. If the manifestation determination determines that the behavior was a manifestation of the student's disability, a functional behavior assessment is conducted and a behavior intervention plan is developed to address the behavior. If the behavior is a manifestation of the student's disability or due to a failure to implement the IEP, the student is returned to the original placement unless both parties agree to a change of placement. IDEA 2004 also provided parents or schools the ability to appeal a decision. In the event of an appeal, the student will remain in the alternative placement until the conclusion of the appeal process. IDEA 1997 stated that a child could be removed for 45 days for more egregious violations (weapons, drugs, or serious injury to others). IDEA 2004 changed the wording to 45 school days, which greatly increases the amount of time a student with a disability can be removed for the previously listed violations (IDEA, 2004).

2008 Amendment of ADA and Conforming Amendment to Section 504

On January 1, 2009, the Americans with Disabilities Amendment Act (ADAAA) of 2008 officially became law in the United States. This amendment to ADA made changes to the way in which disability is legally defined. The definition of disability in relation to ADA as well as students under section 504 of the Rehabilitation Act of 1973 was broadened to allow for services in some situation where an individual may not fit into a disability category but still have issues that impact one or more major life activities. This broadened definition increased the likelihood of a student receiving services under section 504 if they do not qualify for services under IDEA (PL 110-325, ADAAA, 2009).

Every Student Succeeds Act of 2015

President Barack Obama signed the Every Student Succeeds Act (ESSA) into law in December of 2015. This law is the successor to NCLB which had been the driving legislation for education since 2001. The fundamental tenets of the legislation are designed to allow students in the United States to compete on a global scale (Stockdale, 2016). The legislation aims to improve the overall effectiveness of the United States education system through a variety of changes. The legislation ensures that states set high standards so that children graduate high school ready for college and career. It also aims to maintain accountability by guaranteeing that when students are identified as at-risk, states target resources towards what works to help them and their schools improve. There is a targeted focus on the lowest-performing 5 percent of schools; those with high dropout rates, as well as those schools where subgroups of students are struggling. The legislation also empowers state and local systems to develop their own systems for school improvement. It also preserves annual assessments while reducing the burden of standardized testing on students and teachers. ESSA also seeks to provide more young children access to high-quality preschool, providing them with opportunities for success that may

otherwise be unavailable due to a variety of environmental factors (ESSA, 2015). Table 1 describes important historical events in the history of disability education.

Table 1

Important History in Disability Education

YEAR	HISTORICAL EVENT	IMPACT ON PUBLIC SCHOOLS
1965	Congress adds Title VI to the Elementary and Secondary Education Act of 1965 creating a Bureau of Education for the Handicapped (this bureau today is called the Office of Special Education Programs or OSEP).	Educating students with disabilities is still NOT mandated by federal or state law. However, the creation of the Bureau signified that a change was on the horizon.
1972	Two significant supreme court decisions [PARC v. Pennsylvania (1972) and Mills v. D.C. Board of Education (1972)] apply the equal protection argument to students with disabilities.	The courts take the position that children with disabilities have an equal right to access education as their non-disabled peers. Although there is no existing federal law that mandates this stance, some students begin going to school as a result of these court decisions.
1973	Section 504 of the Rehabilitation Act of 1973 is enacted into statute. This national law protects qualified individuals from discrimination based on their disability.	This national law was enacted with little fanfare. Most educators were not aware that this applied to public schools.
1974	The Family Educational Rights and Privacy Act (FERPA) enacted.	Parents are allowed to have access to all personally identifiable information collected, maintained, or used by a school district regarding their child.
1975	The Education for All Handicapped Children Act (EAHCA) is enacted. This was also known as P.L. 94-142. Today we know this law as the Individuals with Disabilities Education Act (IDEA).	Before 1975, children with disabilities were mostly denied an education solely on the basis of their disabilities. EAHCA, along with some key supreme court cases, mandated all

		school districts to educate students with disabilities.
1977	The final federal regulations of EAHCA are released.	The final federal regulations are enacted at the start of the 1977-1978 school year and provide a set of rules in which school districts must adhere to when providing an education to students with disabilities.
1986	The EAHCA is amended with the addition of the Handicapped Children’s Protection Act.	This amendment makes clear that students and parents have rights under EAHCA (now IDEA) and Section 504.
1990	The Americans with Disabilities Act (ADA) is enacted.	ADA adopts the Section 504 regulations as part of the ADA statute. In turn, numerous “504 Plans” for individual students start to become more common place in school districts.
1990	The EAHCA is amended and is now called the Individuals with Disabilities Education Act (IDEA).	This amendment calls for many changes to the old law. One of the biggest was the addition of transition services for students with disabilities. School Districts were now required to look at outcomes and assisting students with disabilities in transitioning from high school to postsecondary life.
1997	IDEA reauthorized	This amendment calls for students with disabilities to be included in on state and district-wide assessments. Also, Regular Education Teachers are now required to be a member of the IEP team.
2001	No Child Left Behind is enacted.	This law calls for all students, including students with disabilities, to

be proficient in math and reading by the year 2014.

2004	IDEA reauthorized and renamed IDEIA	There are several changes from the 1997 reauthorization. The biggest changes call for more accountability at the state and local levels regarding special education teacher certification, changes in discipline procedures, and due process and manifestation determinations.
2015	Every Student Succeeds Act enacted	Follow up to NCLB. Allows more flexibility for state and local systems regarding systems of school improvement while also lessening the burden of standardized testing in order to allow for more college and career readiness oriented curriculum.

Adapted from: Archived: 25 Year History of the IDEA, (ESSA, 2015)

The multiple changes to special education through legislation and litigation have had a tremendous impact on the level of services received by students with disabilities. With each reauthorization of IDEA has been an increasing focus on transition services for individuals with disabilities (Cimera, Burgess, & Bedesem, 2014). While there has been an increased focus on transition for students with disabilities, the services provided for students with emotional and behavior issues has remained woefully inadequate (Montague, Enders, Cavendish, & Castro, 2011).

Research has indicated that minority status is a risk factor for behavioral concerns that impact positive school outcomes (Kempf-Leonard, 2007). Higher levels of both internalizing and externalizing behaviors have been reported in minority youth compared with White, non-

Hispanic youth (Kempf-Leonard, 2007; Richart, Brooks, & Soler, 2003). Understanding the specific risk factors and the variables that are most closely related to negative as well as positive academic, social, and behavioral outcomes across the school years is essential to providing optimal services for children and adolescents most at risk for poor outcomes (Cimera, Burgess, & Bedesem, 2014). The transition to adulthood is stressful for individuals without disabilities; the presence of disabilities only compounds these issues (Neece, Kraemer, & Blacher, 2009). Through the enactment of the Individuals with Disabilities Education Act (IDEA) 1990 to present, the U.S. Department of Education mandated that programs and procedures be put into place to facilitate the transition to adulthood for youth with disabilities. IDEA recommends the implementation of transition planning at the age of 14, and mandates that transition skills must be must be addressed no later than age 16 (IDEA, 2004). Despite these federal mandates in the area of transition support, research has shown that many individuals with disabilities are not provided with adequate supports for successful transition in areas such as engaging student and family participation, setting goals based on students' skills and interests, and ensuring full participation in employment, postsecondary education, and independent living opportunities (Hoffman, Heflinger, Athay, & Davis, 2009). Indeed, research has shown that young adults with disabilities are less likely than their typically developing peers to be employed, to enroll in postsecondary education, and to live independently after high school (Wagner, 1995).

Although many students with mild disabilities indicate a goal of completing postsecondary education, often these goals are often left unmet. The 2011 *National Longitudinal Transition Study-2* (NLTS-2) report indicated 89.9% of high school students with disabilities who participated states a goal of completion of postsecondary education. Data indicated that only approximately 41% actually completed either a two or four-year degree (Sanford et al., 2011).

One hypothesized reason for the students with disabilities lack of reaching these goals may be because students are not taking advantage of the transition-related resources that were available to them. (Barnard-Brak, Lectenberger, & Lan, 2010). The development of transition skills is a vital part of the success of students with disabilities as they determine potential career interests (Nolan, & Gleeson 2016).

Statement of the Problem

There is little current research available related to the comparison of demographic factors including age, race, gender, disability area, and number of discipline referrals among individuals with disabilities on career interests and post-school outcomes. This paucity of research also creates a lack of understanding of the impact of these demographic factors on student's career interests.

Purpose of Study

The purpose of this study is to determine the comparison of an individual with a disability's age, race, gender, disability area, and discipline referrals on career interests. Therefore, this study focuses on the first-letter Holland Code of individuals with disabilities as attained from Holland's Self-Directed Search.

Research Questions

The study investigated the following questions:

1. Is there a relationship between disability type and first letter code of the SDS?
2. Is there a relationship between age and first letter code of the SDS?
3. Is there a relationship between gender and first letter code of the SDS?
4. Is there a relationship between race and first letter code of the SDS?

5. Is there a relationship between the number of discipline referrals and first letter code of the SDS?
6. Are there statistically significant differences between disability type and the first letter code of the SDS?
7. Are there statistically significant differences between age and the first letter code of the SDS?
8. Are there statistically significant differences between gender and the first letter code of the SDS?
9. Are there statistically significant differences between race and the first letter code of the SDS?
10. Are there statistically significant differences between participants based on the number of discipline referrals and the first letter code of the SDS?

Chapter II. Literature Review

Students who receive special education services under IDEA often face numerous barriers to success in the classroom both academically and socially. These barriers impact their ability to develop the core skills needed for successful transition to positive post-secondary outcomes (Yuksel, 2013). This literature review will discuss various disability categories, issues with the overrepresentation of minorities in special education, as well as the transition from high school to post-secondary careers. The following section will discuss and explore common mild disabilities that are most frequently identified in public schools today.

Mild Disabilities

The most commonly identified area of disability in public schools in the United States is Specific Learning Disabilities (SLD). During the 2014–2015 school year, nearly 47% of children who received special education services under IDEA qualified under the disability area of SLD (Kranzler, Gilbert, Robert, Floyd, Benson, & Reschly, 2019). IDEA (2004) defines SLD as the following:

A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include learning problems that are primarily the result of visual, hearing, or motor disabilities; of intellectual disability; of emotional disturbance; or of environmental, cultural, or economic disadvantage (P.L. 108-446, § 602, Stat. 2652).

The broad nature of this disability category lends itself to being the most common disability area identified among students with disabilities (Mazher, 2018). These students often find themselves among their peers without disabilities in the general education classrooms. The fact that the label “Learning Disability” covers so many educational areas can also cause significant issues for students identified as SLD (Swanson, Harris, & Graham, 2003). Students who receive services in the area of SLD have difficulties in educational settings related to the area in which they have impairments. Typically students with an SLD possess IQs that are in the average and above-average range. An average IQ score is 100, an individual must have at least an IQ of 80 to be identified for services under the disability category of SLD. In addition to the IQ score, a student identified as SLD must be at least two years behind their same grade level peers in one or more academic areas. These students face challenges that result from the interaction between their impairments and the demands of culture (Swanson, Harris, & Graham 2003).

Another frequently identified mild disability is Other Health Impairment (OHI). IDEA (2004) defines OHI as the following:

having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment, that (a) is due to chronic or acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome; and (b) adversely affects a child’s educational performance (P.L. 108-446, § 602, Stat. 2652).

Individuals who are identified for services under the disability category of OHI are impacted by some factor other than those defined by the other disability areas defined by IDEA. These

students often experience the same issues as their peers with other disabilities. One struggle for students who receive services under OHI is the “umbrella nature” of the category. Students receiving services under OHI can often have vastly different issues than a peer who has also been identified as OHI (Wodrich, & Spencer, 2007)

Another mild disability that is being identified with greater frequency is Emotional Disturbance (ED). Students with ED struggle to control their emotions and behaviors, which can often lead to negative outcomes. These emotions and behaviors vary in nature and vary from individual to individual. ED refers to students whose behavior falls considerably outside the norm, is chronic in nature, and is socially or culturally unacceptable (Landrum, Tankersley, & Kauffman, 2003). According to IDEA (2004), the definition of ED is as follows:

A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance: an inability to learn which cannot be explained by other factors, an inability to build or maintain interpersonal relations, inappropriate types of feelings or behaviors under normal circumstances, general pervasive mood or unhappiness or depression, tendency to develop physical symptoms related to personal or school problems” (P.L. 108-446, § 602, Stat. 2652).

Students identified with ED often display overt negative behaviors that have a negative impact on their educational performance as well as their social interactions with peers (Carroll, 2013). Walker and Horner (1996) stated that students often carry engrained patterns of antisocial behaviors with them as they enter school. They described this as a student being socialized to an accepted behavioral norm by environmental situations that are permanently engrained in them throughout life. These behaviors are often learned and nurtured in environments of constant strife

including poverty, divorce, abuse, neglect, unemployment, and substance abuse (Walker & Horner, 1996). Unfortunately for these students, the behaviors they are taught are not those traditionally accepted in the schools in which they attend (Carroll, 2013).

The term “mild disability” is one that covers a considerable number of potential disabilities. Although the displaying characteristics and struggles may be different with each individual student and each disability, the core issue is one that is similar. Students with mild disabilities require assistance and accommodations that vary widely in order to be successful academically and socially (Kranzler, et. al, 2019). One major factor that is concerning regarding the identification of students with mild disabilities is the overrepresentation of minorities receiving services under IDEA. The variation in how and why individuals are identified as having mild disabilities has led to troubling trends regarding the disproportionate representation of individuals of color. The following section will explore this phenomenon in greater detail.

Disproportionality and Disability

The disproportionate representation of minority students, particularly African American students, in special education raises concerns regarding the students’ identification as ED or At-Risk for ED (Shippen, Curtis, & Miller, 2009). The chief concern involves the special education services received by the student and whether or not they are helpful or harmful. There is widespread disagreement related to the benefit or lack thereof of special education services. These concerns are compounded by that many students potentially are identified with disabilities who do not in fact qualify for services. Many have also argued that special education may harm students through stigmatization through labeling, lowered expectations, separate educational settings, inferior educational experiences, and failure to close the achievement gap between students with and without disabilities (Artiles, Kozleski, Trent, Osher, & Ortiz, 2010). Others

have argued that while special education is not always implemented as effectively as it can and should be, students with disabilities need special education and are, on balance, far better off for receiving it (Wiley, Brigham, Kauffman, & Bogan, 2013)

Whether one believes special education is harmful or helpful, it is imperative to have a clear understanding of the reasons for disproportionality in special education. Coutinho and Oswald (2000) discussed the causes of disproportionality in special education and indicated that the research has focused primarily on two hypotheses, systemic and susceptibility factors. The first (systemic) occurs when students are referred, evaluated, and placed in special education programs that are biased and operate differently for students from cultural and linguistically diverse backgrounds. The systemic hypothesis indicates that the overrepresentation of minority students in special education is propelled in large part due to the improper identification of students of color based on cultural diversities. These misidentifications likely result from biased understandings of minority students' behavior and achievement, lack of communication between schools and culturally diverse families, and a lack of access to quality instruction in general education among students from low SES homes. The second hypothesis (Coutinho & Oswald, 2000) is that students from minority or low SES homes are overrepresented in special education because they are exposed to risk factors associated with disability more often from a young age (susceptibility). The differential risk or poverty hypothesis is that the overrepresentation of students from minority special education is likely strongly related to the disproportionate overrepresentation of minority children in low SES homes in the United States. Based on this hypothesis, disproportionality among minority students in regard to special education is expected based on the impact of poverty on these students (Coutinho & Oswald, 2000). Although a portion of the disproportionality of disability and need for special education can be explained by

these factors, the level of disproportionality of minority students identified as students with disabilities is still alarmingly high.

Additional research indicates that multiple factors could potentially influence disproportionate African American representation under IDEA. These factors include; socioeconomic factors, experiences with racism, perceived efficacy of general education, school and community demographics, and deficit thinking (McKenna, 2014). Low SES is widely recognized as a contributing factor to the overrepresentation of African American males receiving special education services. Low SES could make proper health care and nutrition less accessible to some African American families, increasing the likelihood of a child possessing a disability (Zhang & Katsiyannis, 2002). McCray, Webb-Johnson, and Neal (2003), state that racism experienced by individuals of color could be a contributor to the development of behavior problems resulting in identification for special education services. Research has indicated that individuals of color whom self-reported experiencing racism or discrimination were associated with higher levels of depressive and maladaptive behaviors. These behaviors are often associated with identification for special education services. (Serpell, Hayling, Stevenson, & Kern, 2009). Another potential contributing factor for overrepresentation is the quality of education provided by teachers to individuals of color (Cullinan & Kauffman, 2005). Educators' racial bias and inability to effectively understand cultural differences could contribute to the high prevalence of students of color at various points in the process of identifying a student with a disability (Cullinan & Sabornie, 2004).

Research has found that African American students have higher rates of overrepresentation in special education programs in predominately Caucasian communities. This research also suggest community socioeconomic status as a potential factor for identification

(McKenna, 2014). Additional research found that African American students were one and a half times as likely to be identified when attending public schools in wealthy communities. The same study indicated that African American males were 11 times more likely to be identified with ED when the student population was greater than 90% Caucasian (Coutinho, Oswald, Best, & Forness, 2002). Although there are a number of possible explanations for why African Americans are more frequently identified in communities that are predominately Caucasian and those that have high socioeconomic status, educator beliefs, and bias towards individuals of color warrant consideration

Perhaps the most troubling and prevalent cause for overrepresentation is deficit thinking among educators related to students of color. African American students receive negative social messages regarding their potential for success (Walker, 2011). A portion of education professionals believes that many African American students are likely to become incarcerated in their lifetime. These beliefs cause bias in the education provided as well as negative verbal and nonverbal messages that has a direct impact on the self-perception of students of color who also experience academic difficulties (Tyson, Darity, & Castellino, 2005). These biased notions of African American student behavior may adversely affect teacher perceptions of culturally relevant student behaviors. Some incorrectly perceive African American students as lacking the skills necessary to achieve academic success as a result of cultural factors that they simply do not understand (McKenzie & Scheurich, 2004). According to this deficit model, African American students are viewed as inferior because their culture does not display the same social norms as the majority culture. As a result, efforts are made to alter culturally relevant behaviors so that they are more consistent with their white counterparts (Ahram, Fergus, & Noguera, 2011). According to this theory, when African American students are unable to meet the expectations

based on the norms of their white counterparts, teachers may misinterpret their culturally relevant behavior as maladaptive, leading to a referral. For example, a teacher may interpret student vocalizations such as a student with communication issues inability to articulate responses in words but rather through different verbalizations as disruptive rather than as a communication style (Neal, Webb-Johnson, & McCray, 2003).

The research of May, et al., (2004) indicates that there is widespread agreement that disproportionate gender and racial or ethnic identification occurs, although the causes or reasoning behind the phenomenon is unknown. The issue is at its most extreme in the area of overrepresentation of African American children and underrepresentation of Asian and Hispanic children (Coutinho & Oswald, 2000) Researchers have proposed multiple reasons for and consequences of the failure to find a well-defined connection between poverty and disproportionality among students identified as having a disability. Many have determined that the relationship between low socioeconomic status and the occurrence of emotional and behavioral problems is complex and may not be as prevalent as the link between poverty and academic achievement (Wiley, Brigham, Kauffman, & Bogan, 2013). The fact that students of Latino origin are underrepresented in special education while being greatly overrepresented among those who are identified as low SES presents issues regarding the hypothesis that low SES is a driving factor in the disproportionality of students identified as having a disability.

Researchers and lawmakers have raised questions regarding the overly simplistic nature of the way poverty and culture are considered regarding mental health services which may lead to erroneous understandings of behavioral and academic outcomes of minority students and their families (Kaufman, 2004). Perhaps most problematic is the prospect that focusing on low SES as an explanation for disproportionality can lead to blaming the victims for the inequalities that

have been imposed upon them through no fault of their own (Artiles, Kozleski, Trent, Osher, & Ortiz, 2010). Additional research focusing on SES and minority status as a factor in disproportionality in special education indicates that the issue is also unsurprisingly prevalent in a broader social and political context. This research includes the history of racism and unfair treatment experienced by ethnic minorities in education and society in general (Artiles et al., 2010).

African Americans and Disabilities

For many years African American students have been identified as having disabilities in greater proportion than their overall proportion in the population (Coutinho & Oswald, 2000). According to the US Department of Education, African Americans currently make up approximately 14% of the total school population in the United States. Child Count data for the 2016-2017 school year indicates that African Americans account for approximately 18.5% of students identified as having a disability (40th Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act, Parts B and C., 2018). The overrepresentation of African American students with disabilities found in youth in the Juvenile Justice System (Shippen, Houchins, & Lockwood, 2014) combined with African Americans having been overrepresented consistently in the U.S. juvenile and criminal justice systems suggest that African American students with disabilities may have needed social skills interventions for extended periods of time. African American students' cultural differences likely place them at high risk for being labeled as having a disability and adjudicated (Coutinho & Oswald, 2000; Mathur, & Griller Clark, 2014).

Many differences between Caucasian and their African American counterparts in the area of social behaviors have been described in the literature. Although there are many differences

between African American and Caucasian social behaviors that may have validity as generalizations, they do not depict all individuals from either race (Olmeda & Kauffman, 2003). To assume that a student will behave in a given manner simply because he or she is of a particular ethnicity, socio-economic status, or gender is unfairly discriminatory. One also has to consider that differing communities of given ethnic or socioeconomic description may differ in expectations and what they teach their children. It is imperative that it is not assumed that a child who is African American will behave in an unacceptable manner or that if the child is Caucasian then he or she will be obedient and behave in an acceptable manner (Bean, 2013). Considering these factors there is no substitute for understanding the individual child and environmental factors surrounding them. In fact, this is exactly what IDEA demands.

Although one should never stereotype based on ethnicity, gender, socio-economic status, race, or any other reason, the question has to be asked; why is the level of overrepresentation of African Americans in special education so high? Awareness of how African American students' social behaviors are said to differ from those of the Caucasian mainstream culture may be important for the development of answers regarding the overrepresentation of African Americans in special education programs (Olmeda & Kauffman, 2003). Finding these answers will likely help in the development of preventative early intervention programs, as well as ongoing supports for students who have already been identified as having a disability.

The varying definitions for behaviors coupled with the lack of understanding of diversity, racial and ethnic, as well as socioeconomic differences are problematic. These factors work in concert with environmental factors that result in the overrepresentation of African American students being identified as having disabilities. These students are likely products of their environments and may not have disabilities, but rather, simply students whose cultural and

environmental norms and customs do not align with those of the school in which they attend (Neal, Webb-Johnson, & McCray, 2003). Until practitioners begin to factor all aspects of a child and not just a snapshot of behaviors at a given point in time these numbers will likely not change. It is imperative that the whole child, including their home environment, SES, cultural norms, and any other pertinent factors be considered when determining eligibility for special education services.

Social behaviors of African Americans and Caucasians often vary with environmental contexts contributing differently to the development of cultural norms and behaviors. Because these sociocultural contexts often do not conform to the social behaviors that are considered acceptable with the expectations of educational culture, they likely have a direct influence on the services offered to African American students (Olmeda & Kauffman, 2003). The values, beliefs, and attitudes of African American students with disabilities are likely very different from those expected of students in the general education classroom. Many factors drive the students' inability to conform to expectations, chief of which is likely the background knowledge and schema they have developed early in life. Due to these differences, social skills trainers, teachers, and counselors should be aware that the use of their personal social curriculum and experiences reflecting their own family context (e.g., middle-class, majority culture values and perceptions) will likely impact their ability to reach low SES African American students (Olmeda & Kauffman, 2003). The degree to which there is a match between social skills and the students' background knowledge and schema will play a large role in the development of positive social behaviors or the remediation of negative social behaviors.

Unfairly labeling or mislabeling children with disabilities imposes a stigma upon them that is often difficult to overcome, and will also often exacerbate the negative behaviors that

caused them to be labeled in the first place (Kauffman & Badar, 2013). African American students are faced with a world that sees them as different or even difficult, and as evidenced by the recent events in Missouri and New York they are often targeted simply because they are a person of color. Perpetuating these stereotypes in a school setting by unfairly labeling them as having a disability simply because they are different can cause irreparable harm to the mental health and overall well-being of the child (Kellam, Ling, Merisca, Brown, & Ialongo, 1998). The following section will discuss the behaviors often associated with students with mild disabilities whose behaviors place them at risk for academic disengagement or school failure.

Behavior as a Result of Disabilities or Students Identified as At-Risk

Often, students with disabilities will present negative overt behaviors directly correlated to their diagnosed disabilities (Ahsan, 2016). These behaviors can take on many forms, including aggression, property destruction, and self-injury (Luiselli, 2012). Students who are often confronted by concepts and subjects that they do not understand are prone to using negative behaviors as a means to escape a situation rather than deal with the fact that they do not understand what is being presented to them. It is easier for them to be seen as “troubled” youth than it is for them to be seen as dumb or not as smart as their classmates.

Individuals with learning disabilities, often experience negative academic interactions at school which in turn impacts their adaptive skills including maladaptive behavior and general social skills (Yuksel, 2013). Evans, Clinkinbeard, and Simi (2015) suggest that youth with learning disabilities are more likely to engage in delinquency than their counterparts without such disabilities. These claims are backed by the extreme overrepresentation of youth with learning disabilities who are incarcerated; estimates range from 30 to 70% (Evans, Clinkinbeard, & Simi 2015). Research indicates that individuals with learning disabilities have significantly

higher instances of violent acts and substance abuse compared to adolescents without such disabilities. Research also indicates that the prevalence of delinquency among adolescents with learning disabilities has found that adolescents with learning disabilities experience more alcohol, tobacco, marijuana use, as well as minor acts of delinquency (Mallet, 2014). Another possibility is that the negative behaviors are a consequence of the differential treatment they receive throughout their life by parents, peers, teachers, and law enforcement officials (Evans, Clinkinbeard, & Simi 2015). Children at risk for academic failure in school with accompanying learning disabilities are at a greater risk for later violent behaviors (Hawkins, Herrenkohl, Farrington, Catalano, & Harachi, 2000). Students with learning disabilities are also disproportionately represented among those who are suspended, expelled, and/or drop out of high school. Suspensions, expulsions, and dropouts are all risk factors for serious delinquent offending activities (Winters, 1997). These experiences seem to mirror those of students identified with ED, potentially explaining the similarities in behaviors. All of these factors accompanied by the constant reminders of their inability to complete academic and social tasks likely cause individuals with disabilities to develop poor self-concept. This poor self-concept often leads to an individual with a disability to lack the ability to see themselves succeeding in life as they transition to post-secondary life (Carter, Lane, Pierson, & Glaeser, 2006). Post-secondary transition and individuals with disabilities will be discussed in the following section of this paper.

High School Students with Disabilities and Transition

The reauthorization of the Individuals with Disabilities Education Improvement Act (IDEA, 2004) clarified the purpose of education for students with disabilities is to prepare students for the transition to life after high school. The overall purpose of IDEA is to ensure that all students with disabilities are provided a free appropriate public education (FAPE) that

encompasses special education and related services designed based on their individual needs and provide support and guidance for the transition to post-secondary education, employment, and independent living (IDEA, 2004). IDEA (2004) defines transition as:

A coordinated set of activities for a student, designed within an outcome-oriented process, which promotes movement from school to post-school activities, including post-secondary education, vocational training, integrated employment (including supported employment), continuing adult education, adult services, independent living, or community participation. The coordinated set of activities shall be based upon the individual student's needs, taking into account the student's preferences and interests, and shall include instruction, community experiences, the development of employment and other post-school adult living objectives, and, when appropriate, acquisition of daily living skills and functional vocational evaluation (§ 602, [a] [19]).

Due to these mandates schools are required to develop secondary programs and procedures that prepare high school students for a successful transition to the postsecondary setting that meets their needs and desires. In order for high school students with disabilities to grow into adults who can function successfully in society, it is imperative that programs for individuals with disabilities provide services that prepare high school students to meet the demands of adult life (Zigmond, 2006). Despite evidence that a student with a disability is progressing academically through the implementation of their IEP, the academic achievement could potentially not be adequate to address appropriate transition skills needed for post-secondary education, employment, or independent living skills as mandated by IDEA (Darden, 2013). For high school students with disabilities to be fully prepared for postsecondary success, whether it be education, employment, or simply independent living skills, it is of utmost importance for programs to be

implemented that address soft skills that are not necessarily academic in nature (West, Kraft, Finn, Martin, Duckworth, Gabrieli, & Gabrieli, 2014). To provide high school students with disabilities the most effective services related to transition, IEP teams should develop goals and programs related to behavioral, social, communicative, functional, and operational skills, based on the unique needs of the youth. Focusing on these factors at an early point in the education of individuals with disabilities will likely provide them with the best chance of successful transition to the post-secondary goal of their choice (McConnell, Martin, Juan, Hennessey, Terry, el-Kazimi, & Willis, 2013). While the factors discussed previously play a pivotal role in the successful transition of high school students with disabilities to post-secondary settings, they are only one piece of a much larger process. A vital aspect of preparation for positive post-secondary outcomes for high school students with disabilities is a clear focus on career development as a part of larger transition programs in the school setting. Career development among high school students with disabilities will be discussed in the following section.

Career Development and Transition in Secondary Schools

As there is a continued focus on career readiness among all secondary students the need for evidence-based practices regarding the transition skills of individuals with disabilities has never been more apparent. The research team of Kenny, et. al. (2006) found that focused career planning and career expectations based on sound career development theory at the start of the school year resulted in greater student engagement at the end of the school year. Similarly, several extensive meta-analyses of the career intervention research also support the use of career development interventions in high (Baker & Taylor, 1998; Whiston, Sexton, & Lasoff, 1998). In a review of school counseling literature, Whiston and Sexton (1998) found support for the use of career development interventions as part of their comprehensive school counseling program.

Although the individuals providing transition services to students with disabilities are typically not school counselors, the information provided would be of equal benefit if provided by special education service providers.

Although IDEA (2004) and its focus on transition have had a positive influence on students with disabilities, research indicates that many are not achieving post-school success (Wagner, Cadwallader, & Marder, 2003; Wagner, Wagner, Newman, Cameto, & Levine, 2005). The research indicated that students with disabilities do not possess the needed skills to succeed at employment, independent living, and community involvement. When compared to their peers without disabilities, students with disabilities also demonstrate higher rates of dropout and higher arrest rates (Benz, Lindstrom, & Yovanoff, 2000).

Kohler and Field (2003) indicated that information regarding effective practices emerged from state and national studies regarding transition skills and students with disabilities. Their analysis of prior research found that students with disabilities experienced poor post-school outcomes related to their peers without disabilities. They found that previous studies indicated that vocational education, paid work experience, parent involvement, and/or interagency collaboration had a positive impact on student outcomes (Kohler & Field, 2003). Results of the National Longitudinal Transition Study (NLTS-2) support these findings and provided additional information regarding school performance. The NLTS-2 findings indicated that in general career instructional education, work experience, and tutoring increased students with disabilities' ability to have successful post-secondary outcomes (Sanford, et. al, 2011).

Kohler and Field (2003) discussed how transition services have changed since the concept was originally theorized for students with disabilities. When transition services and student outcomes were originally considered, most special education service providers placed

considerable emphasis on the transition of students with disabilities from one service system to another. It was generally accepted that students with disabilities would transition from the public school system to the adult community service system (Kohler & Field, 2003). The original conceptualization of transition emphasized three bridges, which represented levels of community services that students with disabilities used to achieve post-school employment. The emphasis on services as the process of transition planning and employment as the outcome represented a somewhat narrow interpretation of the concept (Finn & Kohler, 2010).

With increasing knowledge of the intricacy and importance of effective transition practices, considerable research has been completed that adopted a much broader conceptualization of transition planning and services (Kohler & Field, 2003). The concept often referred to as transition-focused education views transition planning as a fundamental aspect of a student with a disability's education instead of something that is simply added on to their academic programs in order to satisfy a requirement in the easiest manner possible (Kohler & Field, 2003). Transition-focused education has evolved into a concept that puts directed focus toward post-secondary outcomes through instruction and experiences related to academic, career, and extracurricular instruction. There is also an emphasis on the variety in which the transition activities and instruction are delivered based on the individual needs of the student and the local context and students' learning and support needs. The idea of transition-focused education has moved away from a focus on disability and deficit-driven programs and more towards one that focuses on education based on abilities, options, and self-determination (Kohler & Rusch, 1995). Campbell, Connel, Boyle, and Bhaerman (1983) indicated a need for career development in schools, identifying five categories of student outcomes: (a) improved school involvement and performance, (b) personal and interpersonal work skills, (c) preparation for careers, (d) career

planning skills, and (e) career awareness and exploration. These categories will be explored in the following section.

Career Interests and High School Students with Disabilities

Improved school involvement and performances are vital aspects to success in the academic classroom. These behaviors are also imperative for successful career exploration and planning (Hirschi, Niles, & Akos, 2011). In order for students to be engaged in successful career planning, they have to be truly engaged in the process. If a student is not engaged and simply going through the motions, they are not likely to attain sufficient career training that will facilitate a successful transition to the post-secondary setting of their choice (Patton, 2000). The development of strong personal and interpersonal work skills among students with disabilities is a vital aspect of any transition program. These skills are needed for all areas of transition including career development. In order for an individual to successfully transition into a meaningful career, they must first develop the interpersonal and personal work skills that society deems necessary (Crudden, 2012). Student interpersonal skills have long been a focus among special education programs as these are skills that are a foundation of life skills curriculums (Gresham, Elliott, & Kettler, 2010). The focused integration of career readiness skills training into current social and personal skills training methods employed by special educators is imperative for employment skill development among students with disabilities.

Preparation for careers is also a vital aspect of any transition program for students with disabilities. Many models of career education and employment preparation for students with disabilities are based on the developmental and life span concepts of careers originally developed by Donald Super (Clark, Carlson, Fisher, Cook, & D'Alonzo, 1991). These models typically include three stages: career awareness, career exploration, and career experiences. A variety of

in-school learning and community-based work experiences combine to form the basis for the implementation of career development models for students with disabilities in secondary schools (Heal & Rusch, 1995). There are a wide array of career development and employment preparation programs currently implemented for students with disabilities, but the degree to which these programs have a meaningful and direct impact on student post-school outcomes regarding sustained career development is unclear. Further research indicates a relationship between student participation in school vocational programs and post-school success when measured by an individual possessing at a minimum, a part-time, minimum-wage job held 1 year after exiting high school (Benz, Yavonoff, & Doren, 1997).

The research of Schultheiss, Palma, and Manzi (2005) found that developmentally based career development programs that nurture an exploratory attitude in students and promotes the exploration of new domains and ideas is likely to broaden children's informational knowledge and exposure to diverse occupations. They go on to indicate that the exploration of interests and aptitudes can be encouraged through educational activities that expose children to new experiences and information by providing learning experiences that utilize students' talents that might not be used in a traditional setting. Activities intended to promote career development could be aligned with academic content so the students can see how their experiences relate to occupations (Schultheiss, Palma, & Manzi, 2005). Students with behavioral issues often need to see how a concept or lesson applies to their lives before they become truly engaged (Flower, McKenna, Haring, & Pazey, 2015). Career development lessons for students do not necessarily have to be occupational in nature at all times, instead, it is been found to be beneficial to incorporate career development concepts into "real life" scenarios that students will find beneficial (Schultheiss, Palma, & Manzi, 2005). One aspect of career development that is found

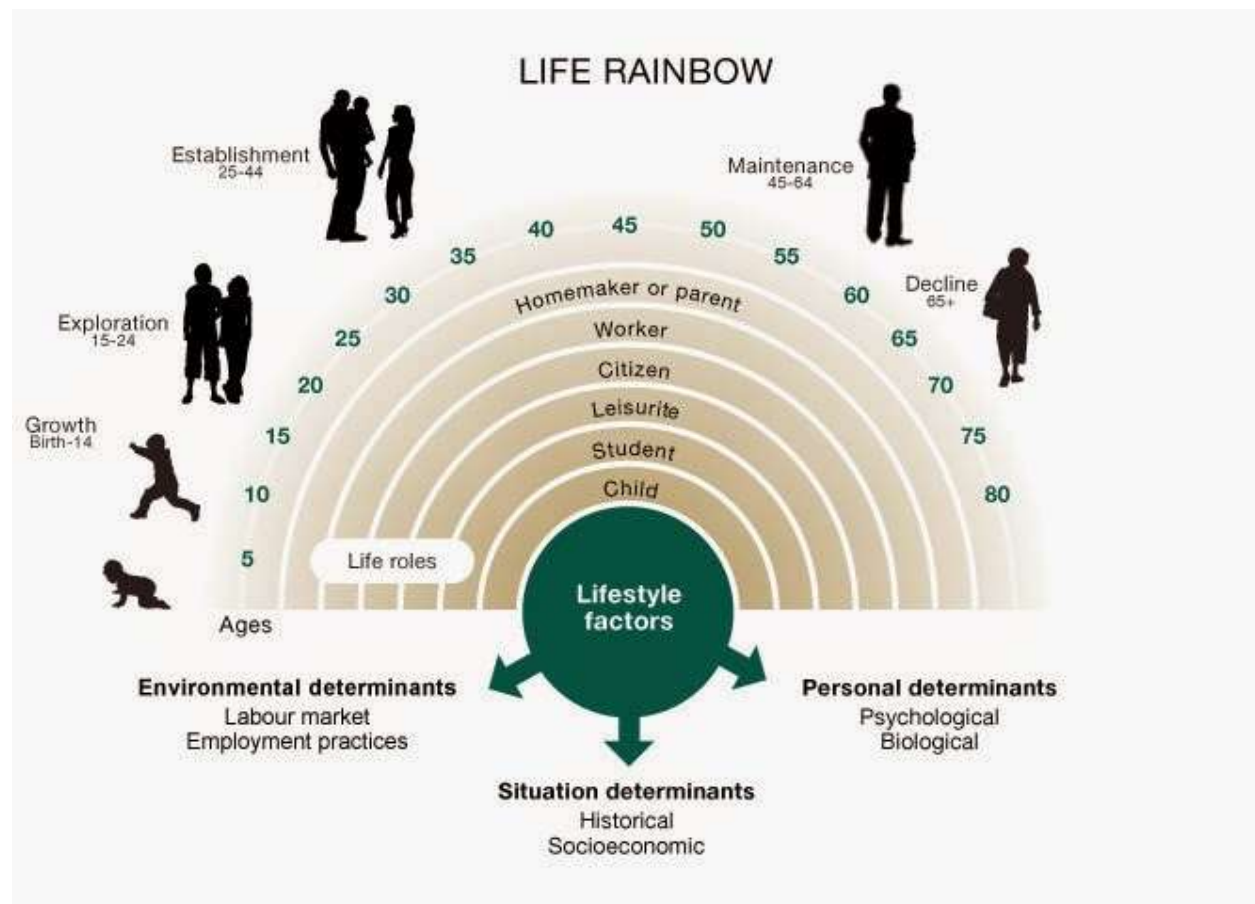
in most research is the need for evidence-based practices to ensure that students are receiving the transition services mandated by IDEA. Selected career development theories will be explored in the subsequent sections of this paper.

Super's Career Development Growth Stages

Donald Super was a pioneer in the field of career counseling who developed the life span theory of career development (Brown & Lent, 2005). He advocated for career development for students starting in the elementary school years (Super, 1990). His life cycle consisted of 5 stages, including Growth (Birth-14), Exploration (15-24), Establishment (25-44), Maintenance (45-64), and Decline (65+). Along with these 5 stages, he also theorized that individuals experience 6 life roles at various nonlinear points in their lives, including Child, Student, Leasurite, Citizen, Worker, and Homemaker or Parent. He posited that multiple factors played a role in how an individual progressed through the various stages and life roles. Some of these factors include environmental determinants, situational determinants, and personal determinants. Super described these stages as being part of an individual's life rainbow (Super, 1990).

Figure 1

Super's Life Stage Rainbow



Retrieved from: <http://catscareerdevelopment.blogspot.com/2015/02/supers-theory.html>

Donald Super's life-span theory of career development states that career awareness and exploration begin early in life and continue until the mid- 30s. According to Super (1990), school-aged years should be spent focusing on career exploration rather than preparation for a specific occupation or career. His Life Cycle Theory stresses the need for focused exploration, experience, and evaluated trial in order to develop career maturity and "planfulness" (Super, 1990). Savickas (2001) defines planfulness as: "an awareness that educational and vocational choices must be made eventually and an inclination to prepare to make these choices". Super's

theory views career development as an ongoing process throughout the individual lifespan that includes developmental tasks for the individual as they negotiate the construction of “self” and the relationship to the world (Herr, Cramer, & Niles, 2004). Super theorized that individuals’ progress through life stages related to career development: growth, exploration, establishment, maintenance, and disengagement (Brown & Lent, 2005). The elementary school years include developmental tasks associated with the growth stage. They include: recognizing and increasing personal control over one’s life, or locus of control (LOC), and becoming concerned about the future, learning to plan for the future, and acquiring competent work habits and a positive attitude toward achieving in school and work (Super, 1990). Super posited that meaningful development across nine defined dimensions would help children accomplish the necessary tasks in career development and develop a strong self-concept providing the capacity for good problem solving and decision making (Herr, Cramer, & Niles, 2004). According to Super (1990), the nine dimensions associated with the accomplishment of required tasks for the career development of students include:

- (a) Information—a recognition of the importance of career information and knowledge of where to acquire such information
- (b) Curiosity—a need to learn more about the world
- (c) Exploration—a drive to engage in experiences that will teach the individual about self and the environment
- (d) Interests—knowledge/awareness of an individual’s likes and dislikes
- (e) Locus of control—the degree to which an individual maintains a sense of control over choices in the immediate environment, the present, and the future

- (f) Key figures—role models and significant persons who influence an individual’s development
- (g) Time perspective—an understanding of how the past, present, and future affect the choices and consequences of behavior
- (h) Planning—knowing the importance of planning
- (I) Self-concept—an identity encompassing roles and behaviors within the context of relationships

(Super, 1990).

Super’s theory of lifespan development fits nicely into the transition education of individuals with disabilities due to its fluid nature and recognition that there are career development outcomes at various levels of ability. Another popular theory in the area of career education is Holland’s Cognitive Information Processing Theory. The following section of this paper will explore and discuss the use of the Self-directed Search to assist students in the exploration of post-secondary options.

Holland’s Self-Directed Search and Career Exploration

Career exploration and education is a vital aspect of transition education for high school students with disabilities. The absence of career development education for high school students with disabilities is likely to limit positive post-secondary outcomes (Patterson, 2018).

The National Longitudinal Transition Study (NTLS) and its successor (NTLS-2) sought to determine the overall transition outcomes of students with disabilities. The level of satisfaction related to post-school outcomes varied greatly by disability. While the results of the NTLS-2 indicated that there was little difference in the percentage of individuals with disabilities who had paid employment versus their peers without disabilities, there was considerable variance in their

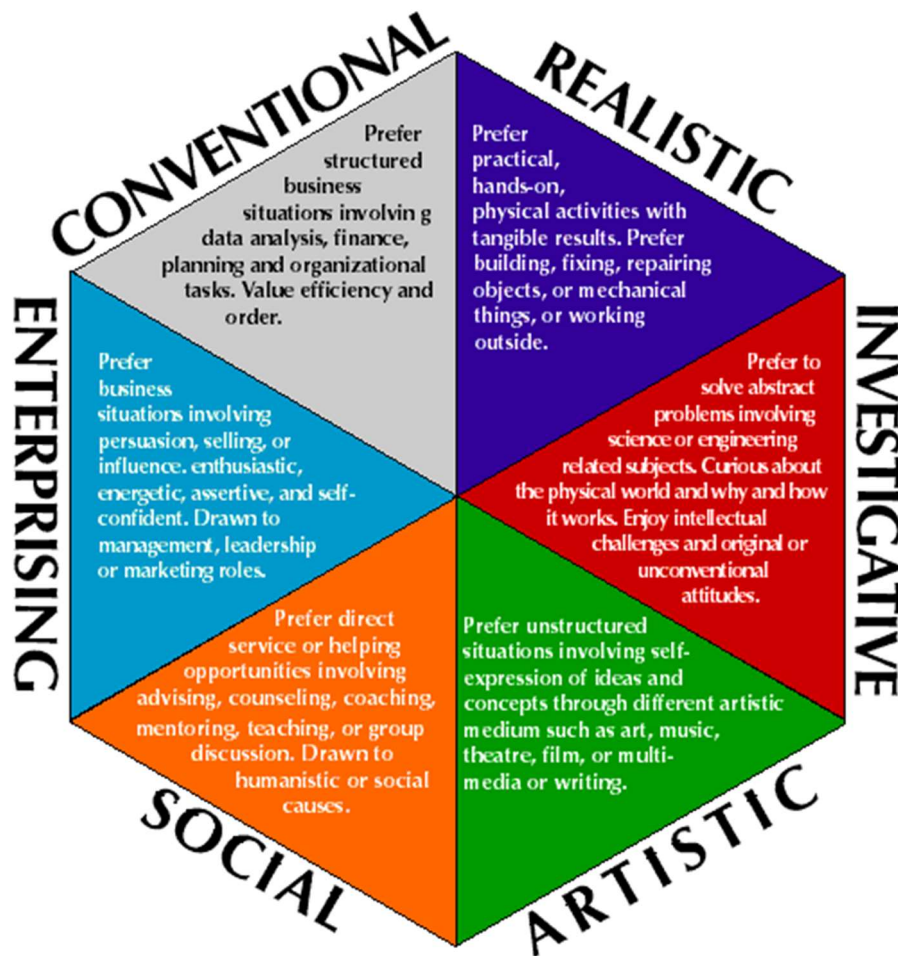
hourly wages. Individuals with disabilities reported an average hourly wage of \$9.30 while their peers without disabilities reported an hourly wage of \$13.20 per hour (Sanford, et al., 2011). While the overall percentage of employment of individuals with disabilities is promising on the surface, the vast gap in wages is concerning and is a likely barrier to a high quality of life. In order to help foster high self-concept, it is vital to provide a means for understanding that there are options available that correlate with personal interests and beliefs. One popular theory employed related to career counseling is Cognitive Information Processing (CIP) that focuses on the emotions, behaviors, and thoughts of the individual as vital components of the career selection process (Sampson, et al., 1998). One key foundation of CIP is based on the belief that decision-making regarding careers is affected by both emotional and cognitive processes. Due to this, it is vital to assess and address negative emotions and career thoughts at the beginning of the career decision-making process (Samson Jr., & Lenz, 1999). The need to discuss the negative career emotions and thoughts is important when working with students who have displayed negative behaviors as they have likely experienced many situations where they were told they weren't able to complete a task or that they would not be successful in some endeavor. Working through these emotions on the front end will likely eliminate some of the issues of low self-esteem at later stages of the transition process. Research has indicated that that dysfunctional career thoughts are associated with career indecision (Saunders, Peterson, Sampson, & Reardon, 2000).

Another well-accepted tool employed by career counselors that could be effective in the area of transition instruction is the Self-Directed Search (Holland, 1994). The SDS was developed using John Holland's theory of vocational choice; the SDS consists of an assessment booklet and supplementary materials. The assessment booklet has users respond to questions

regarding their occupational dreams, preferences for activities and occupations, perceived competencies, and ability self-estimates. The responses are then used to create scores that reflect their resemblance to each of Holland’s six vocational personality types (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional) (Behrens, & Nauta, 2014). Holland’s personality types include descriptions of the characteristics possessed by individuals whose responses place them in a given area; these descriptions are shown in Holland’s Hexagon below.

Figure 2

Holland’s Hexagon



Holland Hexagon. Retrieved from: apps.sa.ucsb.edu

Holland's theory and the Self-directed Search are particularly useful when working with individuals who are unsure of their career or personal interests due to the straightforward explanations provided for each of the six personality types (Osborn, & Reardon, 2006). Holland's hexagon is an interactive model that values the personalities and interests of the individual and utilizes them in an effort to determine the types of activities in which one may prefer to participate. The main objective of Holland's theory is to assist the user in the vocational decision-making process through the determination of personal interests. Holland's codes are based on the idea that every individual has personality characteristics that are directly related to their occupational choice. The identification of relationships between the individual and environment could lead to outcomes including; vocational choice, personal vocational satisfaction, and achievement. Holland's theory and the SDS have proved vital in the field of career counseling due to the ability to evaluate the person-environmental fit, including incarcerated individuals (Derzis, Shippen, Meyer, Curtis, & Houchins, 2013). Due to the similarities between career counseling and transition education, the SDS is likely a tool that could be successful when used in transition education.

The SDS is an effective tool for working with adolescents due to the increasing pressure for teachers and students to focus on college and career readiness. Holland's codes provide an easy-to-understand rendering of potential career interests for students, which allows for more directed post-secondary planning. The focus on college and career readiness is accompanied by the need to produce data as evidence of work towards transition (Osborn, & Reardon, 2006). Although there has been a recent mandate for all students to focus on transition, the idea is one that has been a focus of special education dating back to the passage of IDEA (1990). Although there has been a focus on transition for individuals with disabilities for over 25 years, there are

only a few research studies concerning the use of the SDS and Holland's codes specifically with disabilities.

One such study dealt specifically with students with learning disabilities and the use of the SDS along with the Myers-Briggs Type Indicator (MBTI). The participants in the research consisted of 141 students ranging in age from 14 through 18 years, with 101 boys and 40 girls. All participants were high school students who were diagnosed with a learning disability and were enrolled in resource room programs specifically designed for individuals with SLD. All students enrolled in the SLD resource rooms completed both the SDS and the MBTI. It was noted in the results section that all students completed the inventories and that the SDS would be a useful tool when working with students with learning disabilities (Humes, 1992). Although this study was extremely limited in scope and simply compared results between the SDS and MBTI, it can be used as an indicator that the SDS is an effective tool for working with individuals with disabilities due to the ease in which students with SLD were able to understand the assessment and interpret the results.

A comparison study was completed that looked at the differences between learning types of individuals with disabilities versus individuals without disabilities (Cummings & Maddux, 1987). The participants in the study were 96 individuals with learning disabilities and 96 individuals without learning disabilities. All participants were of high school age and attended schools in the same school district. Students with learning disabilities were identified first and then matched with students without disabilities who met the same demographic factors of sex, ethnicity, and SES. These factors were chosen due to previous research indicating that they had a high level of impact on Holland point codes. Each participant was administered the SDS and then the results for each subgroup were compared for similarities and differences. Results

indicated that there was no significant difference in the Holland codes of students with learning disabilities and those without (Cummings & Maddux, 1987). Much like the previously discussed study, the results did not provide significant results; it can be used as an indicator for the potential success of the SDS when completed with individuals with disabilities.

Another study was conducted by the research team of Osborn and Reardon (2006), who used the SDS while exploring career options with middle school students who were deemed “at-risk” for failure. The participants in their study were 98 mostly African American (95%) students who were at risk for failure and eventual dropout. The participants were placed into 14 groups who then participated in a six-week career counseling program based on the four career choice principles of cognitive information processing, including; knowledge about self, knowledge about options, decision making, and metacognitions (feelings about oneself). The researchers used the SDS to assist the students in the development of career goals and aspirations. The team noted that specific career concerns for middle school students included the need for these students to develop connections between school and work, develop interpersonal skills, and increase knowledge regarding the skills needed for particular careers. During the program, each of the above issues was addressed with results indicating that the use of the SDS in correlation with CIP theory allowed for an easy-to-understand process for the students related to career counseling. The authors noted that following the program students indicated that they had enjoyed the program and that they learned about their career interests, postsecondary opportunities, potential occupations, and decision-making. Perhaps most important to the potential application of the CIP and the SDS to students with behavioral concerns was the positive impact the program had on the participants’ positive self-talk (Osborn & Reardon, 2006).

As previously discussed, transition skills must be addressed when working with individuals with disabilities in a secondary setting. One major component of transition planning and intervention is the area of career development. Many career development programs currently employed in school settings employ many of the tenets of the work of Super (Schultheiss, Palma, & Manzi, 2005). There are also many instances of the use of the research of John Holland and the Self Directed Search being used in secondary settings (Cummings & Maddux, 1987). Research has indicated that both theories are effective methods when used with students in secondary settings, including those with disabilities.

The career development process for students with disabilities is one that is both similar and dissimilar to that of students without disabilities (Wagner, Newman, Cameto, Garza, & Levine, 2005). A major component of career development for individuals with disabilities is the development of self-determination of the individual. Individuals who are self-determined believe in themselves, are self-aware, make decisions informed by research, and set meaningful goals (Thoma & Getzel, 2005). Various resources are available to support self-determination among individuals with disabilities, including The Model for Self-Determination (Field, Hoffman, & Spezia, 1998) and Self-advocacy Planning Strategy for Education and Transition Planning (Van Reusen, Bos, Schumaker, & Deshler, 1994). The development of strong self-determination skills is paramount for successful career planning and development when working with students with disabilities. Another core concept of career development programs for individuals with disabilities is the use of person-centered approaches. Person-centered interventions use a step-by-step process that guarantees the individual's needs are met instead of a one-size-fits all approach. Just as IDEA (2004) mandates that an individual with a disability have an Individualized Education Program in order to meet their academic needs, it is of utmost importance that any

career development program be individualized to meet the needs of the student (Seabrooks-Blackmore & Williams, 2012).

Assessments that are on a level that is appropriate for the individual being assessed are also vital to informed career decision-making among individuals with disabilities (Herbert, Lorenz, & Trusty, 2010). The federal government legally mandates assessment, as part of transition services as a whole (IDEA, 2004). The legislation also mandated that when individuals are 16 (and older), they must be given age and developmentally appropriate assessments related to training and education, employment, and independent living skills to facilitate the development of postsecondary goals in their IEPs. The assessment process should inform all decisions made regarding the student's career development planning and the activities he or she participates in regarding transition (Herbert, Lorenz, Trusty, 2010). Informed decision-making must also be considered during the career development process. In addition to the use of appropriate assessments, environmental factors must also be considered. The overall economy as well as the local economy and realistic job availability must also be factored into career development programs for individuals with disabilities. It would be unrealistic to prepare a student for a career in agriculture if they lived in an urban area or vice versa. Although a student may indicate that they are interested in a particular field or skill, if it is unrealistic for them to pursue a career or training in the field, adjustments need to be made to fit the student as well as their environment (Hanley-Maxwell & Izzo, 2012).

Career development programs for individuals with disabilities must take each student's needs into account when determining the path needed for the most successful transition to post-secondary settings. These decisions must be based on age and developmentally appropriate assessments that give a true sense of the student's desires and needs related to career

development. Additionally, other ancillary factors must be considered when choosing career development programs and activities so that the student is best prepared for the world they are moving into. Perhaps most important when designing career development programs for individuals with disabilities is the development of strong self-determination related to their chosen post-secondary path. The following section of this paper will explore the lack of self-determination among individuals with disabilities and how that impacts the need for career interventions at the secondary level.

Implications for Transition Outcomes

Special education is a field that requires a strong base knowledge of the various definitions and acronyms frequently used by professionals in the field. There are thirteen federally recognized disability categories defined by IDEA (2004) and countless other definitions and acronyms that one must be familiar with. In addition to the overwhelming amount of information regarding basic special education concepts, there are also various mandates that must be addressed when working with students with disabilities in a public school setting. When considering students in secondary settings, one of the most important concepts to consider is the transition to adulthood. Transition from secondary settings to post-secondary settings is stressful enough for individuals without disabilities, which makes focused interventions of utmost importance when working with students with disabilities in the area of transition (Neece, Kraemer, & Blacher, 2009).

IDEA (2004) clarified the mandate that all students receiving services in public schools must receive focused transition services that prepare them for post-secondary life. Evidence-based practices are needed to facilitate strong career development among high school students with disabilities (Flower, McKenna, Haring, & Pazey, 2015). The life span theory of career

counseling has been a widely accepted theory for career counseling for students as early as elementary school. Super's life cycle stages within the context of secondary education, and when used in conjunction with focused individualized transition programs the likelihood of successful transition is increased. Super's life cycle theory focuses on the importance of exploration, experience, and evaluated trial (Super, 1990), making it a strong foundation for career interventions for individuals with disabilities at the secondary level. Many transition programs are designed with community-based experiences that provide opportunities for exploration, experience, and evaluated trials (Hasnain, & Balcazar, 2009). In order for individuals with disabilities to develop the career-related skills needed for success, they need to be presented with opportunities to succeed (Creed, Patton, & Bartrum, 2004). Exploration, experience, and evaluated trials provide students with the opportunity to develop higher, which in turn allows them to become more engaged in the transition programs designed to help them determine an appropriate career path.

Holland's Self Directed Search could also prove useful in assisting students with disabilities to develop a better understanding of their interests and abilities as they plan for their post-secondary transition. Holland's theory and the Self-directed Search are particularly useful when working with individuals who are unsure of their career or personal interests due to the straightforward explanations provided for each of the six personality types (Osborn, & Reardon, 2006). The design of the assessment tool is such that it is easy to understand and follow and the final product provides detailed explanations of the six possible personality types including the type of jobs that fit into each. Holland's theory and the SDS have proved vital in the field of career counseling due to the ability to evaluate the person-environmental fit (Derzis, Shippen,

Meyer, Curtis, & Houchins, 2013), which a concept that many students with disabilities struggle with.

Transition is a concept that is of vital importance when working with individuals with disabilities of all types. A fundamental part of the transition process has to be career exploration and development that is based on evidence-based practices. When considering individuals with behavior concerns, specifically those labeled at-risk of ED or with ED, it is imperative that all negative emotions and feelings regarding self-determination and ability are addressed. If a student continues believing that he or she cannot be successful in post-secondary life, it is very likely that they will not be successful. Further exploration in this area of research is needed in order to examine what the career interests of high school students with disabilities means for positive post-secondary outcomes.

Chapter III. Methods

The purpose of this study was to explore the impact of factors including; disability area, race, age, gender, and the number of discipline referrals, on results from Holland's Self Directed Search (Holland, 1973) completed by high school students with mild disabilities. Existing data from secondary students (n = 64) was used to determine potential trends related to student survey responses and outcomes. This chapter is a presentation of the research questions, a description of participants, study setting, research design and rationale for the study, data collection procedures, materials and equipment used, protection of human subjects, and a review of the methods for data analysis is provided.

Research Questions

1. Is there a relationship between disability type and first letter code of the SDS?
2. Is there a relationship between age and first letter code of the SDS?
3. Is there a relationship between gender and first letter code of the SDS?
4. Is there a relationship between race and first letter code of the SDS?
5. Is there a relationship between number of discipline referrals and first letter code of the SDS?
6. Is there a statistically significant mean difference between disability type and the first letter code of the SDS?
7. Is there a statistically significant mean difference between age and the first letter code of the SDS?
8. Is there a statistically significant mean difference between gender and the first letter code of the SDS?

9. Is there a statistically significant mean difference between race and the first letter code of the SDS?
10. Is there a statistically significant mean difference between participants based on the number of discipline referrals and the first letter code of the SDS?

Participants

Participants in this study were high school students with mild disabilities who were served in a general education classroom. All participants (n = 64) participated in a multi-faceted transition program that involved extensive planning, assessment, and participation in small group and individual activities based on their individual needs and preferences. All participants completed Holland's Self Directed Search 4th Edition (Holland, 1994) as part of their transition planning process noted in their IEP. Participants in this study (n=64) consisted of both male (n=51) and female (n=13) students who received special education services under varying disability categories, but all were diagnosed as having mild conditions, at a large public high school in Alabama. Participants ranged in age from 15 to 19 with the following frequency: 15 (n=10), 16 (n=14), 17 (n=16), 18 (n=13), and 19 (n=11). Races represented in the participant group are African American (n=50) and white (n=14). Of the 13 disability categories identified by IDEIA, participants in this study were representative of six disability categories. The six disability areas represented include: Other Health Impairment (OHI) (n=18), Specific Learning Disability (SLD) (n=33), Autism (n=3), Emotional Disturbance (ED) (n=6), Traumatic Brain Injury (TBI) (n=1), and Intellectual Disability (ID) (n=3). Finally, the number of discipline referrals received by each participant ranged from zero to eight with the following frequency: 0 (n=18), 1 (n=7), 2 (n=7), 3 (n=9), 4 (n=8), 5 (n=7), 6 (n= 5), 7 (n=2), and 8 (n=1).

Study Setting

The location and setting for the study was a large high school in a southeastern state with an enrollment of approximately 1800 students. The school is part of a larger system with an overall enrollment of approximately 8,300 students with a racial demographic breakdown as follows: White (58.2%), African American (26.2%), Asian (10.48%), Latinx (4.37 %), Native American/Alaskan (.08%), and Pacific Islander (.05%). The system-wide free and reduced lunch rate was 25.37%, the location school free and reduced lunch rate was 18.79%.

The study data were gathered in the special education resource room. The resource room was an area away from general education peers where transition-related planning and activities occurred. Most of the participants completed the instrument during an assigned resource period with a small number pulled out of elective classes in order to participate in transition-related activities.

Research design and rationale

The study used data from the Self-Directed Search and is descriptive in nature. The data extracted from the surveys were analyzed to determine any trends apparent in the career interests of the student participants. The data was also analyzed to determine the correlation among and mean differences related to various demographic factors and the types of careers students with disabilities envision themselves participating in after high school. These demographic factors included; disability type, race, age, gender, and discipline referrals. The rationale for the study was the hypothesis that individuals with disabilities are less likely to see themselves in productive, meaningful careers based on the previous factors. The SDS is an effective tool for working with adolescents due to the increasing pressure for teachers and students to focus on college and career readiness (Van Rooij, Jansen, & van de Grift, 2017).

Holland's codes provide an easy-to-understand rendering of potential career interests for students, which allows for more directed post-secondary planning. The focus on college and career readiness is accompanied by the need to produce data as evidence of work towards transition (Osborn, & Reardon, 2006). Although there has been a recent mandate for all students to focus on transition, the idea is one that has been a focus of special education dating back to the passage of IDEA (1990). Although there has been a focus on transition for individuals with disabilities for over 25 years, there are only a few research studies concerning the use of the SDS and Holland's codes specifically with disabilities. Due to the similarities between career counseling and transition education, the SDS is likely a tool that could be successful when used in transition education.

Data Collection

Previously existing data were transferred to the researcher from the high school where the students completed the SDS and then analyzed to determine the relationship that disability area, race, age, gender, and discipline referrals have on the results of the Self-Directed Search. The Independent Variables (IV) for the study is the career interest area of the individual student participants and the relationships between interest areas and demographic factors of the participants.

The Dependent Variable (DV) for the study was the first letter code of each participant from Holland's Self-Directed Search, which is administered to all students participating in a multi-faceted transition program in the target school setting.

Materials and Equipment

Previously existing de-identified data from the Self-Directed Search (Holland, 1973) was used in the study. Holland's Self-Directed search was originally developed by John Holland

(1973) and has been completed by more than 22 million individuals, and is widely recognized and accepted as a valid measure of an individuals' career interests (Rayman & Atanasoff, 1999). The SDS was developed using John Holland's theory of vocational choice; the SDS consists of an assessment booklet and supplementary materials. The assessment booklet has users respond to questions regarding their occupational dreams, preferences for activities and occupations, perceived competencies, and ability self-estimates. The responses are then used to create scores that reflect their resemblance to each of Holland's six vocational personality types (Realistic, Investigative, Artistic, Social, Enterprising, and Conventional) (Behrens, & Nauta, 2014). Holland's personality types include descriptions of the characteristics possessed by individuals whose responses place them in a given area. The three-letter codes identified for each student based on the responses to the SDS survey provided identification of careers that coincide with each letter code. These codes were analyzed to determine the relationships between the three-letter codes and the previously described factors. Holland's theory and the Self-directed Search are particularly useful when working with individuals who are unsure of their career or personal interests due to the straightforward explanations provided for each of the six career interest types (Osborn, & Reardon, 2006). Holland's hexagon is an interactive model that values the personalities and interests of the individual and utilizes them in an effort to determine the types of activities in which one may prefer to participate. The main objective of Holland's theory is to assist the user in the vocational decision-making process through the determination of personal interests. Holland's codes are based on the idea that every individual has personality characteristics that are directly related to their occupational choice. The identification of relationships between the individual and environment could lead to outcomes including; vocational choice, personal vocational satisfaction, and achievement. Holland's theory and the

SDS have proved vital in the field of career counseling due to the ability to evaluate the person-environmental fit (Derzis, Shippen, Meyer, Curtis, & Houchins, 2013).

Data Analysis and Procedures

All participants completed the Self-Directed Search in the resource room with their case manager as part of their transition planning process. The first letter of the three-letter code resulting from the completion of Holland's Self-Directed Search was compiled, resulting in the data used for this study. Data were analyzed utilizing Statistical Package for Social Sciences (SPSS) version 26.0. Data were analyzed using descriptive statistics and inferential statistics. Descriptive statistics were used to highlight the frequency of specific first letter codes in relation to participant's demographic factors (disability area, age, race, gender, number of discipline referrals). Inferential statistics were used to determine the relationships between demographic factors (disability area, age, race, gender, number of discipline referrals) and the first letter of the three-letter code resulting from the SDS. The first letter indicates the strongest area of career interest for the respondent. All data were hand entered into SPSS, with a second individual also entering data to ensure all data entry was completed correctly. After data were verified as being entered correctly it was analyzed through a variety of correlations and Analyses of Variances (ANOVA).

Correlational Analysis and ANOVA's were conducted to analyze data from participant's first letter Holland code. Analysis was conducted to determine potential relationships and correlations between career interests and demographic factors (disability area, age, race, gender, and the number of discipline referrals) of participants.

Protection of Human Subjects

The Auburn University Instructional Review Board approved this study. Human subjects were placed in no danger due to the nature of the study and data collection. A staff member at the school location provided all data with the researcher having no interaction with participants. De-identified data were collected from previously completed student SDS results and provided with no identifiable demographic factors. All names, birthdates, and other identifiers were redacted prior to data being presented to the researcher. All of these safeguards were put in place to ensure that the researcher would not identify student participants.

Chapter IV. Results

Results from the data analysis are presented in this chapter. Participants' demographic information is discussed and illustrated in a chart. Next, first letter Holland code results from the Self-Directed Search were examined to evaluate the relationships and mean differences with five independent variables, including disability type, age, gender, race, and the number of discipline referrals. Finally, descriptive data are discussed and illustrated in charts. A series of Correlations and ANOVAs were conducted to assess whether or not relationships exist between the variables and whether the means of the dependent variables are significantly different among groups. Using information from the Correlations, research questions 1 through 5 are presented and followed by an explanation of the results. Correlational analysis in the form of Pearson Coefficient was utilized in an effort to determine if there is a correlation between demographic factors and first letter Holland code in Research Questions 6 to 10. These demographic factors included disability type, age, gender, race, and the number of discipline referrals. Using information from the ANOVA, research questions 6 through 10 are presented and followed by an explanation of the results.

Participants in this study (n=64) consisted of both male (n=51) and female (n=13) students who received special education services under varying disability categories at a large public high school in Alabama. Participants ranged in age from 15 to 19 with the following frequency: 15 (n=10), 16 (n=14), 17 (n=16), 18 (n=13), and 19 (n=11). Races represented in the participant group are African American (n=50) and white (n=14). Of the 13 disability categories identified by IDEIA, participants in this study were representative of six disability categories. The six disability areas represented include: Other Health Impairment (OHI) (n=18), Specific Learning Disability (SLD) (n=33), Autism (n=3), Emotional Disturbance (ED) (n=6), Traumatic Brain Injury (TBI) (n=1), and Intellectual Disability (ID) (n=3). Finally, the number of discipline

referrals received by each participant ranged from zero to eight with the following frequency: 0 (n=18), 1 (n=7), 2 (n=7), 3 (n=9), 4 (n=8), 5 (n=7), 6 (n= 5), 7 (n=2), and 8 (n=1). Table 2 shows participants' demographic make-up. See Table 2 for demographics.

Table 2

Participant demographics

Characteristics	n	%
Age		
15	10	15.6
16	14	21.9
17	16	25.0
18	13	20.3
19	11	17.2
Gender		
Male	51	79.7
Female	13	20.3
Ethnicity		
African American	50	78.1
White	14	21.9
Disability		
OHI	18	28.1
SLD	33	51.5
AUT	3	4.7
ED	6	9.4

Characteristics	n	%
TBI	1	1.6
ID	3	4.7

Table 3

Participant demographics

Discipline Referrals	N	%
0	18	28.1
1	7	10.9
2	7	10.9
3	9	14.1
4	8	12.5
5	7	10.9
6	5	7.8
7	2	3.1
8	1	1.6

The following section describes the results of data analysis for each research question proposed by the current study.

Data Analysis Results

Correlational analysis in the form of Pearson Correlation Coefficient was utilized to determine if there is a correlation between demographic factors and first letter Holland code in Research Questions 1 to 5. These included disability type, age, gender, race, and the number of discipline referrals.

Research Question 1

The first research question was stated as follows: Is there a relationship between disability type and first letter code of the Self-Directed Search?

Correlation Coefficient was calculated using Pearson Coefficient to determine whether or not a statistically significant relationship exists between disability type and first letter code provided by SDS results. The results indicated that there is not a statistically significant correlation between disability type and first letter SDS code ($r = -.015, p = .908$). Data analysis indicates that there is no significant relationship between disability type and the first letter code chosen by participants.

Research Question 2

The second research question was stated as follows: Is there a relationship between age and first letter code of the Self-Directed Search?

Correlation Coefficient was calculated using Pearson Coefficient to determine whether or not a statistically significant relationship exists between age and first letter code provided by SDS results. The results indicated that there is not a statistically significant correlation between age and first letter SDS code, ($r = -.034, p = .787$). Data analysis indicates that there is no significant relationship between age and the first letter code chosen by participants.

Research Question 3

The third research question was stated as follows: Is there a relationship between gender and first letter code of the Self-Directed Search?

Correlation Coefficient was calculated using Pearson Coefficient to determine whether or not a statistically significant relationship exists between gender and first letter code provided by SDS results. The results indicated that there is not a statistically significant correlation between

gender and first letter SDS code, ($r = -.094$, $p = .459$). Data analysis indicates that there is no significant relationship between Gender and the first letter code chosen by participants.

Research Question 4

The fourth research question was stated as follows: Is there a relationship between race and first letter code of the Self-Directed Search?

Correlation Coefficient was calculated using Pearson Coefficient to determine whether or not a statistically significant relationship exists between race and first letter code provided by SDS results. The results indicated that there is a statistically significant correlation between race and first letter SDS, ($r = .349$, $p = .005$). Data analysis indicates that there is a significant relationship between race and the first letter code chosen by participants.

Research Question 5

The fifth research question was stated as follows: Is there a relationship between the number of discipline referrals and first letter code of the Self-Directed Search?

Correlation Coefficient was calculated using Pearson Coefficient to determine whether or not a statistically significant relationship exists between the number of discipline referrals and first letter code provided by SDS results. The results indicated that there is not a statistically significant correlation between the number of discipline referrals and first letter SDS code, ($r = -.111$, $p = .381$). Data analysis indicates that there is no significant relationship between the number of discipline referrals and the first letter code chosen by participants.

Table 4.

Correlations Among Study Variables

	RIASEC code	Age	Race	Gender	Disability	Discipline referrals
RIASEC code	_____					
Age	.034	_____				
Race	-.349**	-.236	_____			
Gender	-.094	.024	.109	_____		
Disability	-.015	.034	-.333**	-.289*	_____	
Discipline Referrals	-.111	.076	-.344**	-.068	.123	_____

** $p < .01$.

* $p < .05$.

A series of ANOVAs were used to determine statistical differences, if any, between the variables. These demographic variables included disability type, age, gender, race, and the number of discipline referrals.

Research Question 6

The sixth research question was stated as follows: Are there statistically significant mean differences between disability type and the first letter code of the SDS?

A within-subjects ANOVA was used to compare disability type and the first letter Holland code for each participant. Results of the ANOVA indicate that the mean difference between disability type and first letter code was not significant, ($F(5, 58) = .160, p = .98$), Data analysis indicates that there is a not significant difference between disability type and the first letter code chosen by participants

Research Question 7

The seventh research question was stated as follows: Is there statistically significant difference between age and the first letter code of the SDS?

A within-subjects ANOVA was used to compare age and the first letter Holland code for each participant. Results of the ANOVA indicate that the mean difference between age and first letter code was not significant, ($F(5, 58) = 1.07, p = .39$), Data analysis indicates that there is a not significant mean difference between age and the first letter code chosen by participants

Research Question 8

The eighth research question was stated as follows: Is there statistically significant difference between gender and the first letter code of the SDS?

A within-subjects ANOVA was used to compare gender and the first letter Holland code for each participant. Results of the ANOVA indicate that the mean difference between gender and first letter code was not significant, ($F(5, 58) = 234.95, p = .80$), Data analysis indicates that there is a not significant difference between gender and the first letter code chosen by participants.

Research Question 9

The ninth research question was stated as follows: Is there statistically significant difference between race and the first letter code of the SDS?

A within-subjects ANOVA was used to compare race and the first letter Holland code for each participant. Results of the ANOVA indicate that the mean difference between race and first letter code was significant, ($F(1, 62) = 8.62, p < .05$), Data analysis indicates that there is a significant mean difference between race and first letter code chosen by participants. African American students SDS results indicated a much greater likelihood of Realistic being identified as their interest area. In total, 32 African American Students reported Realistic while only 1 Caucasian student reported Realistic.

Research Question 10

The tenth research question was stated as follows: Is there statistically significant difference between participants based on the number of discipline referrals and the first letter code

A within-subjects ANOVA was used to compare the number of discipline referrals and the first letter Holland code for each participant. Results of the ANOVA indicate that the mean difference between the number of discipline referrals and first letter code was not significant, ($F(5, 58) = .988, p = .43$), Data analysis indicates that there is a not significant difference between the number of discipline referrals and the first letter code chosen by participants.

Chapter V. Discussion

The purpose of this study was to examine the relationship between the dependent variable, first letter Holland code, and independent variables, disability type, age, gender, race, and the number of discipline referrals of participants. Correlational analysis in the form of Pearson Coefficient was utilized in an effort to determine if there is a correlation between demographic factors and first letter Holland code in Research Questions one to five. These included disability type, age, gender, race, and the number of discipline referrals. A series of ANOVAs were used to determine statistical differences, if any, between the variables. These demographic variables included disability type, age, gender, race, and the number of discipline referrals. The importance of this study lies in the analysis of participant responses in relation to the previously listed demographic factors, (i.e. what impact do these factors have on the career interests of students with disabilities?).

The first demographic factor analyzed was the disability type of participants. Demographic information indicated that the majority of the participants were identified with mild disabilities, Specific Learning Disability (n=33), Other Health Impairment (n=18), Emotional Disturbance (n=6), Autism (n=3), and Traumatic Brain Injury (n=1). Research questions one and six analyzed the impact of disability type on career interests of participants based on first letter Holland code. Analysis of correlational data for research question number one found that there was no significant relationship between disability type and first letter code, $r=-.015$, $p=.908$. Analysis of ANOVA data for research question number 6 found that there was no significant correlation between disability type and first letter Holland code, $F(5,58)=.160$, $p=.98$. These findings are in line with findings from previous research which will be discussed in the following paragraph.

The research team of Turner, Unfeker, Cichy, Peper, and Juang (2011) found results that were very similar to the current study when they assessed the career interests of students with disabilities. The current study included students who were also enrolled in a comprehensive transition program so it is not surprising that outcomes were similar. Results from their study indicated that the dispersion of Holland Codes was not related to the disability type of the respondents. Although they did acknowledge that the study had the potential for bias due to participants being enrolled in a transition program that encouraged them to explore multiple career opportunities (Turner, Unkefer, Cichy, Peper & Juang, 2011). The findings of the previous study as well as those of the current study both indicate that disability type is not significantly related to the Holland Code derived from the completion of the SDS. As identified in the prior research this could likely be due to students with disabilities participating in transition-related programs that broaden their career interests. If this is the case, then it only underscores the importance of effective transition-related training for students with disabilities. These programs can play a vital role in lifelong career decision-making.

The second demographic factor analyzed was the age of participants. Demographic information indicated that the age of participants ranged from 15 years to 19 years as follows: 15 years (n=10), 16 years (n=14), 17 years (n=16), 18 years (n=13), and 19 years (n=11). Research questions two and seven analyzed the impact of age on career interests of participants based on first letter Holland code. Analysis of correlational data for research question number two found that there was no significant relationship between age and first letter code, $r=-.034$, $p=.787$. Analysis of ANOVA data for research question number seven found that there was no significant correlation between age and first letter Holland code, $F(5,58)=1.07$, $p=.39$.

The above finding indicates that there is not a clinically significant relationship or correlation between the age of participants and the Holland Code derived from the SDS. The age of the participants did not impact the results of the study in a way in which any specific trends could be identified. There is a paucity of research related to the impact of the age of participants on potential career outcomes. This dearth of research indicates a potential area of future research into the impact of the current age of participants or potentially a study related to the impact of transition-related programs year over year as the student progresses through school.

The third demographic factor analyzed was the gender of participants. Demographic information indicated that approximately 80% of participants were male (n=51) with approximately 20% (n=13). These factors in line with typical representation in special education where males are more likely to be identified for special education services than their female peers (Wehmeyer & Schwartz, 2001). Research questions three and eight analyzed the impact of gender on the career interests of participants based on first letter Holland code. Analysis of correlational data for research question number three found that there was no significant relationship between gender and first letter code, $r=-.094$, $p=.459$. Analysis of ANOVA data for research question number eight found that there was no significant correlation between gender and first letter Holland code, $F(5,58)=234.95$, $p=.80$.

Research completed by Burgstahler and Chang (2007) explored gender differences related to perceptions of transition program interventions between male and female students with disabilities. Females with disabilities indicated that they felt an increased level of belief in themselves and the careers they could see themselves in when compared to male participants. The career-related self-belief of female participants prior to participation in transition-related education was lower than those of males. Following participation in career-related transition

programs, female participants showed an increased level of self-belief related to various careers at a higher level than their male counterparts (Burgstahler & Chang, 2007). These results indicate that while the current study may not indicate a relationship between gender and career choice, a career-related transition program could have a tremendous impact on the career interests of female students with disabilities.

The fourth demographic factor analyzed was race, which provided a strong description of the participants. Demographic information indicated that approximately 78% (n=50) of the study participants were African American. The idea of overrepresentation of minorities, specifically African Americans in special education is a concerning trend nationwide. According to the US Department of Education, African Americans currently make up approximately 14% of the total school population in the United States. Child Count Data for the 2016-2017 school year indicates that African Americans account for approximately 18.5% of students identified as having a disability (40th Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act, Parts B and C., 2018). Although the focus of this study was not primarily focused on disproportionality, the demographic information provides reason for concern.

In relation to the current study, data analysis indicated that race plays a statistically significant factor on the career-related interests of participants. More specifically, African American students were much more likely to choose responses on the Self Directed Search resulted in a first letter code of Realistic than their Caucasian peers. Approximately 50% of African American participants (n=32) had a first letter code of Realistic while white participants' results were spread more evenly amongst all areas with only one participant identifying as Realistic. Individuals with Realistic as their first letter code typically have interests in areas that

are more hands-on in nature. The students are likely to see themselves working in careers such as auto mechanic, carpenter, cook, and many other careers that are more physical in nature (Holland, 1994).

Research questions four and nine analyzed the impact of race on career interests of participants based on first letter Holland code. Analysis of correlational data for research question number four found that results indicated that there is a statistically significant correlation between race and first letter SDS, $r=-.349$, $p=.005$. Analysis of ANOVA data for research question number nine found that there is a significant difference between race and first letter code chosen by participants, $F(1,62)=8.62$, $p<.05$.

The issue of race and special education has been a challenging issue for many years. Previous research related to the overrepresentation of minorities, specifically young men of color has yielded troubling findings (McKenna, 2014). The impact of race on career-related outcomes is one of those areas of concern. Students of color are more likely to be identified for special education than their white counterparts (Coutinho & Oswald, 2000). The simple fact that African Americans are more often identified for special education services can have a dramatic impact on career-related outcomes. Oftentimes these students are repeatedly told they are not good enough or smart enough to be successful due in large part to behavior that may not be deemed as culturally acceptable by their white teachers (Bean, 2013). Gao and Eccles (2020) found that the career aspirations of African American Students were not significantly different than those of their white counterparts. However, another study found that African American students see themselves in careers with lower education requirements at age 18 than they did at age 14 (Shu & Marini, 2008). The varying findings of the current study and past research indicate that the relationship between race and career outcomes warrants additional study.

The fifth and final demographic factor analyzed was the number of discipline referrals. Demographic information indicated that approximately 28% (n=18) of the study participants had no discipline referrals. The remaining participants' number of discipline referrals were as follows: 1 referral, 10.9% (n=7), 2 referrals, 10.9% (n=7), 3 referrals, 14.1% (n=9), 4 referrals 12.5%, (n=8), 5 referrals, 10.9%, (n=7), 6 referrals, 7.8%, (n=5), 7 referrals, 3.1% (n=2), and 8 referrals, 1.6% (n=1). Research questions five and ten analyzed the impact of the number of discipline referrals on career interests of participants based on first letter Holland code. Analysis of correlational data for research question number five found that there was no significant relationship between the number of discipline referrals and first letter code, $r=-.111, p=.381$. Analysis of ANOVA data for research question number ten found that there was no significant mean difference between the number of discipline referrals and first letter Holland code, $F(5,58)=.988, p=.43$.

The above findings indicate that there is no significant relationship or correlation between the number of discipline referrals and the first letter Holland Code of participants. There is a paucity of research related specifically to the number of discipline referrals and career-related outcomes. While research specifically related to career outcomes and discipline referrals is nonexistent, there is considerable research related to negative behavior and the long-term impact it has on student achievement. Research indicates that negative behaviors of students are a consequence of the differential treatment they receive throughout their life by parents, peers, teachers, and law enforcement officials (Evans, Clinkinbeard, & Simi 2015). All of these factors accompanied by the constant reminders of their inability to complete academic and social tasks likely cause individuals with disabilities to develop poor self-concept. This poor self-concept

often leads to an individual with a disability to lack the ability to see themselves succeeding in life as they transition to post-secondary life (Carter, Lane, Pierson, & Glaeser, 2006).

Limitations

There are several limitations to the current study. These limitations include sample size, the limited variance of demographics of participants, and study design.

Sample Size

The sample size (n=64) represented the participants in a transition education program at a single high school in southeast Alabama. These results may not be able to be generalized to all special education students in the United States. These participants were chosen due to their proximity to the researcher and the availability of data for use in the current study.

Participant Demographics

Due to the nature of special education populations, the demographic differences of participants, specifically race and gender had limited variance. The racial breakdown of African American (n=50) and Caucasian (n=14) and the gender breakdown of Male (n=51) and Female (n=13) may not be an accurate representation of special education programs across the United States.

Study Design

The use of preexisting deidentified data is a major design limitation of the study as it does not provide any insight into how the students were presented with transition-related instruction. The lack of understanding and knowledge of how students were instructed in the area of career awareness has the potential to inadvertently impact the results of the current study.

Future Research

The results of the current study indicated a significant mean difference between the first letter SDS code and the race of the participant. Despite the fact that this study focused exclusively on individuals with disabilities, it cannot be ignored that the potential for racial bias exists in all areas of education. Future research in this area should include both, individuals with disabilities and their general education counterparts. Research comparing students from predominately Caucasian schools, predominately African American schools, and those with a mixture could be very insightful as to how students from each school view themselves related to potential careers. This research could bring to light unintentional bias and help inform how educators provide instruction related to career outcomes for all students.

Conclusion and Implications for Practice

Participants in this study were high school students with mild disabilities who were served in a general education classroom. All participants (n=64) participated in a multi-faceted transition program that involved extensive planning, assessment, and participation in small group and individual activities based on their individual needs and preferences. All participants completed Holland's Self Directed Search 4th Edition (Holland, 1994) as part of their transition planning process noted in their IEP.

Deidentified existing data in the form of participants' SDS results along with demographic factors was obtained with permission from school officials for the current study. Data was analyzed to determine the relationship that disability area, race, age, gender, and discipline referrals have on the results of the Self-Directed Search. The Independent Variables (IV) for the study are the career interest areas of the individual student participants and the relationships between interest areas and demographic factors

of the participants. Correlational Analysis and ANOVA's were conducted to analyze data from participant's first letter Holland code. Analysis was conducted to determine potential relationships and correlations between career interests and demographic factors (disability area, age, race, gender, and the number of discipline referrals) of participants. Results of the study showed a significant relationship between first letter SDS code and the race of the participant. The study also showed a significant mean difference between first letter SDS code and the race of the participant. These findings indicate the need for future research related to career-related instruction in special education programs with a focus on eliminating racial bias.

The current study revealed that the first letter code of the SDS is not significantly related to the participants' disability, age, race, gender, or number of discipline referrals. Though significance was not found statistically in these areas, the need for a better understanding of career-focused beliefs continues to be an area that needs a better understanding.

The current study revealed that there is a significant mean difference as well as a significant relationship between the first letter SDS code and the race of the participant. These results indicate that there is potential for a participant's race to have an impact on their career-related beliefs. These results could indicate a larger issue in the way individuals of color see themselves related to potential careers. The current study indicated that there is not a significant mean difference between the first letter SDS code and the age, disability area, gender, and the number of discipline referrals of the participants. While there was no significant difference indicated, there is still potential for these factors to play a role in the career awareness of individuals with disabilities. Special education professionals must make every effort to eliminate any bias that exists in their career instruction related to these and any other areas. Addressing

bias through self-reflection and understanding of one's own implicit biases when developing transition related instructional strategies is imperative in order to foster positive long-term outcomes for all students with disabilities..

The significant mean difference and relationship between race and first letter SDS code indicates the need for focused career instruction based on the needs of each individual student. Race should not be a limiting factor for a student when choosing a potential career. Continued improvement in career-related transition education for all students with disabilities could lead to stronger employment opportunities for all students, no matter what their race is. The significant mean difference as well as the significant relationship between first letter SDS code and the race of participants is also a troubling result that likely extends beyond the special education classroom. It is vital that all students are presented information in a way that is unbiased in all areas so that the potential barriers to success are minimized to the greatest degree possible.

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**AUBURN UNIVERSITY INSTITUTIONAL REVIEW BOARD for RESEARCH INVOLVING HUMAN SUBJECTS
REQUEST FOR EXEMPT CATEGORY RESEARCH**

For Information or help completing this form, contact: **THE OFFICE OF RESEARCH COMPLIANCE**, 115 Ramsay Hall
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Revised 2/1/2014 Submit completed form to IRBsubmit@auburn.edu or 115 Ramsay Hall, Auburn University 36849.

Form must be populated using Adobe Acrobat / Pro 9 or greater standalone program (do not fill out in browser). Hand written forms will not be accepted.

Project activities may not begin until you have received approval from the Auburn University IRB.

1. PROJECT PERSONNEL & TRAINING

PRINCIPAL INVESTIGATOR (PI):

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KEY PERSONNEL: List Key Personnel (other than PI and FA). Additional personnel may be listed in an attachment.

Name	Title	Institution	Responsibilities

KEY PERSONNEL TRAINING: Have all Key Personnel completed CITI Human Research Training (including elective modules related to this research) within the last 3 years? YES NO

TRAINING CERTIFICATES: Please attach CITI completion certificates for all Key Personnel.

2. PROJECT INFORMATION

Title: A Descriptive Study of the Impact of Discipline Referrals on Career Related Interest Areas of Secondary Students with Disabilities.

Source of Funding: Investigator Internal External

List External Agency & Grant Number: NA

List any contractors, sub-contractors, or other entities associate with this project.

NA

List any other IRBs associated with this project (including those involved with reviewing, deferring, or determinations).

NA

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July 21, 2016

This letter serves as expressed permission for Andrew Tyler Booker to have access to, and use student data for the purpose of his dissertation and any subsequent publication with the understanding that Auburn High School will not be identifiable in any way. Data is limited in scope to student responses and results from the Self-Directed Search interest inventory, de-identified demographic information, and number of discipline referrals as collected by Auburn High staff. All names and other identifying information will be redacted from all documents prior to release to Mr. Booker. This data is not to be used for any purpose other than Mr. Booker's dissertation research and/or subsequent publication.

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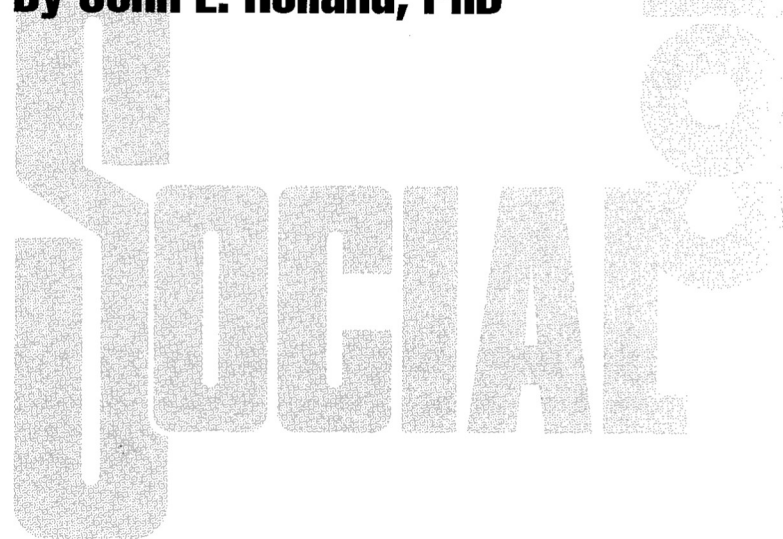


Enterprising

ASSESSMENT BOOKLET

**A Guide to Educational and
Career Planning**

By John L. Holland, PhD



SOCIAL

This booklet may help you explore what occupation to follow. If you have already made up your mind about an occupation, it may support your idea or suggest other possibilities. If you are uncertain about what occupation to follow, the booklet may help you to locate a small group of occupations for further consideration. Most people find that filling out this booklet is helpful and fun. If you follow the directions carefully, page by page, you should enjoy the experience. Do not rush; you will gain more by approaching the task thoughtfully. Use a lead pencil, so you can erase easily.

Name _____

Age _____ Sex _____ Date _____

Years of education completed _____

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Occupational Daydreams

1. List below the occupations you have considered in thinking about your future. List the careers you have daydreamed about as well as those you have discussed with others. Try to give a history of your daydreams. Put your most recent choice on Line 1 and work backwards to the earlier jobs you have considered.

Occupation	Code		
1. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>
2. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>
3. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>
4. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>
5. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>
6. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>
7. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>
8. _____	<input type="text"/>	<input type="text"/>	<input type="text"/>

2. Now use The Occupations Finder. Locate the three-letter code for each of the occupations you just wrote down. This search for occupational codes will help you learn about the many occupations in the world. This task usually takes from 5 to 15 minutes. The Alphabetized Occupations Finder, which is available separately, may make your search easier.

If you can't find the exact occupation in The Occupations Finder, use the occupation that seems most like your occupational aspiration.

If you're in a hurry, do the coding after you complete this booklet.

Activities

Blacken under **L** for those activities you would like to do. Blacken under **D** for those things you would dislike doing or would be indifferent to.

R

	L	D
Fix electrical things	<input type="checkbox"/>	<input type="checkbox"/>
Repair cars	<input type="checkbox"/>	<input type="checkbox"/>
Fix mechanical things	<input type="checkbox"/>	<input type="checkbox"/>
Build things with wood	<input type="checkbox"/>	<input type="checkbox"/>
Take a Technology Education (e.g., Industrial Arts, Shop) course	<input type="checkbox"/>	<input type="checkbox"/>
Take a Mechanical Drawing course	<input type="checkbox"/>	<input type="checkbox"/>
Take a Woodworking course	<input type="checkbox"/>	<input type="checkbox"/>
Take an Auto Mechanics course	<input type="checkbox"/>	<input type="checkbox"/>
Work with an outstanding mechanic or technician	<input type="checkbox"/>	<input type="checkbox"/>
Work outdoors	<input type="checkbox"/>	<input type="checkbox"/>
Operate motorized machines or equipment	<input type="checkbox"/>	<input type="checkbox"/>

Total No. of Ls

I

	L	D
Read scientific books or magazines	<input type="checkbox"/>	<input type="checkbox"/>
Work in a research office or laboratory	<input type="checkbox"/>	<input type="checkbox"/>
Work on a scientific project	<input type="checkbox"/>	<input type="checkbox"/>
Study a scientific theory	<input type="checkbox"/>	<input type="checkbox"/>
Work with chemicals	<input type="checkbox"/>	<input type="checkbox"/>
Apply mathematics to practical problems	<input type="checkbox"/>	<input type="checkbox"/>
Take a Physics course	<input type="checkbox"/>	<input type="checkbox"/>
Take a Chemistry course	<input type="checkbox"/>	<input type="checkbox"/>
Take a Mathematics course	<input type="checkbox"/>	<input type="checkbox"/>
Take a Biology course	<input type="checkbox"/>	<input type="checkbox"/>
Study scholarly or technical problems	<input type="checkbox"/>	<input type="checkbox"/>

Total No. of Ls

A

	L	D
Sketch, draw, or paint	<input type="checkbox"/>	<input type="checkbox"/>
Design furniture, clothing, or posters	<input type="checkbox"/>	<input type="checkbox"/>
Play in a band, group, or orchestra	<input type="checkbox"/>	<input type="checkbox"/>
Practice a musical instrument	<input type="checkbox"/>	<input type="checkbox"/>
Create portraits or photographs	<input type="checkbox"/>	<input type="checkbox"/>
Write novels or plays	<input type="checkbox"/>	<input type="checkbox"/>
Take an Art course	<input type="checkbox"/>	<input type="checkbox"/>
Arrange or compose music of any kind	<input type="checkbox"/>	<input type="checkbox"/>
Work with a gifted artist, writer, or sculptor	<input type="checkbox"/>	<input type="checkbox"/>
Perform for others (dance, sing, act, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
Read artistic, literary, or musical articles	<input type="checkbox"/>	<input type="checkbox"/>

Total No. of Ls

Competencies

Blacken under **Y** for “Yes” for those activities you can do well or competently. Blacken under **N** for “No” for those activities you have never performed or perform poorly.

R

	Y	N
I have used wood shop power tools such as a power saw, lathe, or sander	<input type="checkbox"/>	<input type="checkbox"/>
I can make a scale drawing	<input type="checkbox"/>	<input type="checkbox"/>
I can change a car’s oil or tire	<input type="checkbox"/>	<input type="checkbox"/>
I have operated power tools such as a drill press, grinder, or sewing machine	<input type="checkbox"/>	<input type="checkbox"/>
I can refinish furniture or woodwork	<input type="checkbox"/>	<input type="checkbox"/>
I can make simple electrical repairs	<input type="checkbox"/>	<input type="checkbox"/>
I can repair furniture	<input type="checkbox"/>	<input type="checkbox"/>
I can use many carpentry tools	<input type="checkbox"/>	<input type="checkbox"/>
I can make simple plumbing repairs	<input type="checkbox"/>	<input type="checkbox"/>
I can build simple articles of wood	<input type="checkbox"/>	<input type="checkbox"/>
I can paint rooms of a house or an apartment	<input type="checkbox"/>	<input type="checkbox"/>
Total No. of Ys	<input type="checkbox"/>	

I

	Y	N
I can use algebra to solve mathematical problems	<input type="checkbox"/>	<input type="checkbox"/>
I can perform a scientific experiment or survey	<input type="checkbox"/>	<input type="checkbox"/>
I understand the “half-life” of a radioactive element	<input type="checkbox"/>	<input type="checkbox"/>
I can use logarithmic tables	<input type="checkbox"/>	<input type="checkbox"/>
I can use a computer to study a scientific problem	<input type="checkbox"/>	<input type="checkbox"/>
I can describe the function of the white blood cells	<input type="checkbox"/>	<input type="checkbox"/>
I can interpret simple chemical formulae	<input type="checkbox"/>	<input type="checkbox"/>
I understand why man-made satellites do not fall to earth	<input type="checkbox"/>	<input type="checkbox"/>
I can write a scientific report	<input type="checkbox"/>	<input type="checkbox"/>
I understand the “Big Bang” theory of the universe	<input type="checkbox"/>	<input type="checkbox"/>
I understand the role of DNA in genetics	<input type="checkbox"/>	<input type="checkbox"/>
Total No. of Ys	<input type="checkbox"/>	

A

	Y	N
I can play a musical instrument	<input type="checkbox"/>	<input type="checkbox"/>
I can participate in two- or four-part choral singing	<input type="checkbox"/>	<input type="checkbox"/>
I can perform as a musical soloist	<input type="checkbox"/>	<input type="checkbox"/>
I can act in a play	<input type="checkbox"/>	<input type="checkbox"/>
I can do interpretive reading	<input type="checkbox"/>	<input type="checkbox"/>
I can do a painting, watercolor, or sculpture	<input type="checkbox"/>	<input type="checkbox"/>
I can arrange or compose music	<input type="checkbox"/>	<input type="checkbox"/>
I can design clothing, posters, or furniture	<input type="checkbox"/>	<input type="checkbox"/>
I write stories or poetry well	<input type="checkbox"/>	<input type="checkbox"/>
I can write a speech	<input type="checkbox"/>	<input type="checkbox"/>
I can take attractive photographs	<input type="checkbox"/>	<input type="checkbox"/>
Total No. of Ys	<input type="checkbox"/>	

S

	L	D
Meet important educators or therapists	<input type="checkbox"/>	<input type="checkbox"/>
Read sociology articles or books	<input type="checkbox"/>	<input type="checkbox"/>
Work for a charity	<input type="checkbox"/>	<input type="checkbox"/>
Help others with their personal problems	<input type="checkbox"/>	<input type="checkbox"/>
Study juvenile delinquency	<input type="checkbox"/>	<input type="checkbox"/>
Read psychology articles or books	<input type="checkbox"/>	<input type="checkbox"/>
Take a Human Relations course	<input type="checkbox"/>	<input type="checkbox"/>
Teach in a high school	<input type="checkbox"/>	<input type="checkbox"/>
Supervise activities for mentally ill patients	<input type="checkbox"/>	<input type="checkbox"/>
Teach adults	<input type="checkbox"/>	<input type="checkbox"/>
Work as a volunteer	<input type="checkbox"/>	<input type="checkbox"/>
Total No. of Ls	<input type="checkbox"/>	

E

	L	D
Learn strategies for business success	<input type="checkbox"/>	<input type="checkbox"/>
Operate my own service or business	<input type="checkbox"/>	<input type="checkbox"/>
Attend sales conferences	<input type="checkbox"/>	<input type="checkbox"/>
Take a short course on administration or leadership	<input type="checkbox"/>	<input type="checkbox"/>
Serve as an officer of any group	<input type="checkbox"/>	<input type="checkbox"/>
Supervise the work of others	<input type="checkbox"/>	<input type="checkbox"/>
Meet important executives and leaders	<input type="checkbox"/>	<input type="checkbox"/>
Lead a group in accomplishing some goal	<input type="checkbox"/>	<input type="checkbox"/>
Participate in a political campaign	<input type="checkbox"/>	<input type="checkbox"/>
Act as an organizational or business consultant	<input type="checkbox"/>	<input type="checkbox"/>
Read business magazines or articles	<input type="checkbox"/>	<input type="checkbox"/>
Total No. of Ls	<input type="checkbox"/>	

C

	L	D
Fill out income tax forms	<input type="checkbox"/>	<input type="checkbox"/>
Add, subtract, multiply, and divide numbers in business or bookkeeping	<input type="checkbox"/>	<input type="checkbox"/>
Operate office machines	<input type="checkbox"/>	<input type="checkbox"/>
Keep detailed records of expenses	<input type="checkbox"/>	<input type="checkbox"/>
Set up a record-keeping system	<input type="checkbox"/>	<input type="checkbox"/>
Take an Accounting course	<input type="checkbox"/>	<input type="checkbox"/>
Take a Commercial Math course	<input type="checkbox"/>	<input type="checkbox"/>
Take an inventory of supplies or products	<input type="checkbox"/>	<input type="checkbox"/>
Check paperwork or products for errors or flaws	<input type="checkbox"/>	<input type="checkbox"/>
Update records or files	<input type="checkbox"/>	<input type="checkbox"/>
Work in an office	<input type="checkbox"/>	<input type="checkbox"/>
Total No. of Ls	<input type="checkbox"/>	

S

	Y	N
I find it easy to talk with all kinds of people	<input type="checkbox"/>	<input type="checkbox"/>
I am good at explaining things to others	<input type="checkbox"/>	<input type="checkbox"/>
I could work as a neighborhood organizer	<input type="checkbox"/>	<input type="checkbox"/>
People seek me out to tell me their troubles	<input type="checkbox"/>	<input type="checkbox"/>
I can teach children easily	<input type="checkbox"/>	<input type="checkbox"/>
I can teach adults easily	<input type="checkbox"/>	<input type="checkbox"/>
I am good at helping people who are upset or troubled	<input type="checkbox"/>	<input type="checkbox"/>
I have a good understanding of social relationships	<input type="checkbox"/>	<input type="checkbox"/>
I am good at teaching others	<input type="checkbox"/>	<input type="checkbox"/>
I am good at making people feel at ease	<input type="checkbox"/>	<input type="checkbox"/>
I am much better at working with people than with things or ideas	<input type="checkbox"/>	<input type="checkbox"/>
Total No. of Ys	<input type="checkbox"/>	

E

	Y	N
I know how to be a successful leader	<input type="checkbox"/>	<input type="checkbox"/>
I am a good public speaker	<input type="checkbox"/>	<input type="checkbox"/>
I can manage a sales campaign	<input type="checkbox"/>	<input type="checkbox"/>
I can organize the work of others	<input type="checkbox"/>	<input type="checkbox"/>
I am an ambitious and assertive person	<input type="checkbox"/>	<input type="checkbox"/>
I am good at getting people to do things my way	<input type="checkbox"/>	<input type="checkbox"/>
I am a good salesperson	<input type="checkbox"/>	<input type="checkbox"/>
I am a good debater	<input type="checkbox"/>	<input type="checkbox"/>
I can be very persuasive	<input type="checkbox"/>	<input type="checkbox"/>
I have good planning skills	<input type="checkbox"/>	<input type="checkbox"/>
I have some leadership skills	<input type="checkbox"/>	<input type="checkbox"/>
Total No. of Ys	<input type="checkbox"/>	

C

	Y	N
I can file correspondence and other papers	<input type="checkbox"/>	<input type="checkbox"/>
I have held an office job	<input type="checkbox"/>	<input type="checkbox"/>
I can use an automated posting machine	<input type="checkbox"/>	<input type="checkbox"/>
I can do a lot of paperwork in a short time	<input type="checkbox"/>	<input type="checkbox"/>
I can use simple data processing equipment	<input type="checkbox"/>	<input type="checkbox"/>
I can post credits and debits	<input type="checkbox"/>	<input type="checkbox"/>
I can keep accurate records of payment or sales	<input type="checkbox"/>	<input type="checkbox"/>
I can enter information at a computer terminal	<input type="checkbox"/>	<input type="checkbox"/>
I can write business letters	<input type="checkbox"/>	<input type="checkbox"/>
I can perform some routine office activities	<input type="checkbox"/>	<input type="checkbox"/>
I am a careful and orderly person	<input type="checkbox"/>	<input type="checkbox"/>
Total No. of Ys	<input type="checkbox"/>	

Occupations

This is an inventory of your feelings and attitudes about many kinds of work. Show the occupations that *interest* or *appeal* to you by blackening under **Y** for "Yes." Show the occupations that you *dislike* or find *uninteresting* by blackening under **N** for "No."

	Y	N		Y	N	
Airplane Mechanic	<input type="checkbox"/>	<input type="checkbox"/>	Career Counselor	<input type="checkbox"/>	<input type="checkbox"/>	
Auto Mechanic	<input type="checkbox"/>	<input type="checkbox"/>	Sociologist	<input type="checkbox"/>	<input type="checkbox"/>	
Carpenter	<input type="checkbox"/>	<input type="checkbox"/>	High School Teacher	<input type="checkbox"/>	<input type="checkbox"/>	
Truck Driver	<input type="checkbox"/>	<input type="checkbox"/>	Substance Abuse Counselor	<input type="checkbox"/>	<input type="checkbox"/>	
Surveyor	<input type="checkbox"/>	<input type="checkbox"/>	Juvenile Delinquency Expert	<input type="checkbox"/>	<input type="checkbox"/>	
Construction Inspector	<input type="checkbox"/>	<input type="checkbox"/>	Speech Therapist	<input type="checkbox"/>	<input type="checkbox"/>	
Radio Mechanic	<input type="checkbox"/>	<input type="checkbox"/>	Marriage Counselor	<input type="checkbox"/>	<input type="checkbox"/>	
Locomotive Engineer	<input type="checkbox"/>	<input type="checkbox"/>	Clinical Psychologist	<input type="checkbox"/>	<input type="checkbox"/>	
Machinist	<input type="checkbox"/>	<input type="checkbox"/>	Social Science Teacher	<input type="checkbox"/>	<input type="checkbox"/>	
Electrician	<input type="checkbox"/>	<input type="checkbox"/>	Personal Counselor	<input type="checkbox"/>	<input type="checkbox"/>	
Farmer	<input type="checkbox"/>	<input type="checkbox"/>	Youth Camp Director	<input type="checkbox"/>	<input type="checkbox"/>	
Helicopter Pilot	<input type="checkbox"/>	<input type="checkbox"/>	Social Worker	<input type="checkbox"/>	<input type="checkbox"/>	
Electronic Technician	<input type="checkbox"/>	<input type="checkbox"/>	Rehabilitation Counselor	<input type="checkbox"/>	<input type="checkbox"/>	
Welder	<input type="checkbox"/>	<input type="checkbox"/>	Playground Director	<input type="checkbox"/>	<input type="checkbox"/>	
Total R Ys			<input type="text"/>	Total S Ys		<input type="text"/>
Meteorologist	<input type="checkbox"/>	<input type="checkbox"/>	Buyer	<input type="checkbox"/>	<input type="checkbox"/>	
Biologist	<input type="checkbox"/>	<input type="checkbox"/>	Advertising Executive	<input type="checkbox"/>	<input type="checkbox"/>	
Astronomer	<input type="checkbox"/>	<input type="checkbox"/>	Manufacturer's Representative	<input type="checkbox"/>	<input type="checkbox"/>	
Medical Laboratory Technician	<input type="checkbox"/>	<input type="checkbox"/>	Business Executive	<input type="checkbox"/>	<input type="checkbox"/>	
Anthropologist	<input type="checkbox"/>	<input type="checkbox"/>	Master of Ceremonies	<input type="checkbox"/>	<input type="checkbox"/>	
Chemist	<input type="checkbox"/>	<input type="checkbox"/>	Salesperson	<input type="checkbox"/>	<input type="checkbox"/>	
Independent Research Scientist	<input type="checkbox"/>	<input type="checkbox"/>	Real Estate Salesperson	<input type="checkbox"/>	<input type="checkbox"/>	
Writer of Scientific Articles	<input type="checkbox"/>	<input type="checkbox"/>	Department Store Manager	<input type="checkbox"/>	<input type="checkbox"/>	
Geologist	<input type="checkbox"/>	<input type="checkbox"/>	Sales Manager	<input type="checkbox"/>	<input type="checkbox"/>	
Botanist	<input type="checkbox"/>	<input type="checkbox"/>	Public Relations Executive	<input type="checkbox"/>	<input type="checkbox"/>	
Scientific Research Worker	<input type="checkbox"/>	<input type="checkbox"/>	TV Station Manager	<input type="checkbox"/>	<input type="checkbox"/>	
Physicist	<input type="checkbox"/>	<input type="checkbox"/>	Small Business Owner	<input type="checkbox"/>	<input type="checkbox"/>	
Social Science Researcher	<input type="checkbox"/>	<input type="checkbox"/>	Legislator	<input type="checkbox"/>	<input type="checkbox"/>	
Environmental Analyst	<input type="checkbox"/>	<input type="checkbox"/>	Airport Manager	<input type="checkbox"/>	<input type="checkbox"/>	
Total I Ys			<input type="text"/>	Total E Ys		<input type="text"/>
Poet	<input type="checkbox"/>	<input type="checkbox"/>	Bookkeeper	<input type="checkbox"/>	<input type="checkbox"/>	
Musician	<input type="checkbox"/>	<input type="checkbox"/>	Budget Reviewer	<input type="checkbox"/>	<input type="checkbox"/>	
Novelist	<input type="checkbox"/>	<input type="checkbox"/>	Certified Public Accountant	<input type="checkbox"/>	<input type="checkbox"/>	
Actor/Actress	<input type="checkbox"/>	<input type="checkbox"/>	Credit Investigator	<input type="checkbox"/>	<input type="checkbox"/>	
Free-Lance Writer	<input type="checkbox"/>	<input type="checkbox"/>	Bank Teller	<input type="checkbox"/>	<input type="checkbox"/>	
Musical Arranger	<input type="checkbox"/>	<input type="checkbox"/>	Tax Expert	<input type="checkbox"/>	<input type="checkbox"/>	
Journalist	<input type="checkbox"/>	<input type="checkbox"/>	Inventory Controller	<input type="checkbox"/>	<input type="checkbox"/>	
Artist	<input type="checkbox"/>	<input type="checkbox"/>	Computer Operator	<input type="checkbox"/>	<input type="checkbox"/>	
Singer	<input type="checkbox"/>	<input type="checkbox"/>	Financial Analyst	<input type="checkbox"/>	<input type="checkbox"/>	
Composer	<input type="checkbox"/>	<input type="checkbox"/>	Cost Estimator	<input type="checkbox"/>	<input type="checkbox"/>	
Sculptor/Sculptress	<input type="checkbox"/>	<input type="checkbox"/>	Payroll Clerk	<input type="checkbox"/>	<input type="checkbox"/>	
Playwright	<input type="checkbox"/>	<input type="checkbox"/>	Bank Examiner	<input type="checkbox"/>	<input type="checkbox"/>	
Cartoonist	<input type="checkbox"/>	<input type="checkbox"/>	Accounting Clerk	<input type="checkbox"/>	<input type="checkbox"/>	
Entertainer	<input type="checkbox"/>	<input type="checkbox"/>	Audit Clerk	<input type="checkbox"/>	<input type="checkbox"/>	
Total A Ys			<input type="text"/>	Total C Ys		<input type="text"/>

Self-Estimates

1. Rate yourself on each of the following traits *as you really think you are when compared with other persons your own age*. Give the most accurate estimate of how you see yourself. Circle the appropriate number and *avoid rating yourself the same in each ability*.

	Mechanical Ability	Scientific Ability	Artistic Ability	Teaching Ability	Sales Ability	Clerical Ability
High	7	7	7	7	7	7
	6	6	6	6	6	6
	5	5	5	5	5	5
Average	4	4	4	4	4	4
	3	3	3	3	3	3
	2	2	2	2	2	2
Low	1	1	1	1	1	1
	R	I	A	S	E	C

	Manual Skills	Math Ability	Musical Ability	Understanding of others	Managerial Skills	Office Skills
High	7	7	7	7	7	7
	6	6	6	6	6	6
	5	5	5	5	5	5
Average	4	4	4	4	4	4
	3	3	3	3	3	3
	2	2	2	2	2	2
Low	1	1	1	1	1	1
	R	I	A	S	E	C

How To Organize Your Answers

Start on page 4. Count how many times you said **L** for "Like." Record the number of **Ls** or **Ys** for each group of Activities, Competencies, or Occupations on the lines below.

Activities (pp. 4-5)

R **I** **A** **S** **E** **C**

Competencies (pp. 6-7)

R **I** **A** **S** **E** **C**

Occupations (p. 8)

R **I** **A** **S** **E** **C**

Self-Estimates (p. 9)
(What number did you circle?)

R **I** **A** **S** **E** **C**

R **I** **A** **S** **E** **C**

Total Scores

(Add the five R scores, the five I scores, the five A scores, etc.)

R **I** **A** **S** **E** **C**

The letters with the three highest numbers indicate your Summary Code. Write your Summary Code below. (If two scores are the same or tied, put both letters in the same box.)

Summary Code

Highest

2nd

3rd

What Your Summary Code Means _____

Your Summary Code is a simple way of organizing information about people and jobs. It can be used to discover how your special pattern of interests, self-estimates, and competencies resembles the patterns of interests and competencies that many occupations demand. In this way, your Summary Code locates suitable groups of occupations for you to consider.

It is vital that you search The Occupations Finder for every possible ordering of your three-letter code. For example, if you are an **ESC**, search for all the **ESC, ECS, SEC, SCE, CES, and CSE** occupations by completing Steps 1 and 2.

Step 1. Find the occupations whose codes are *identical* with yours and list those occupations that are of interest to you. If your code is **SEI**, occupations with codes **SEI** are identical. Go to Step 2, whether or not you find an occupation with a code identical to yours.

Summary Code _____

Occupation	Education	Occupation	Education
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Step 2. Make a list of occupations whose Summary Codes *resemble* yours. Search The Occupations Finder for the five arrangements of your code. For example, if your code is **IRE**, search for occupations with codes of **IER, RIE, REI, EIR, and ERI**. Start by writing down the five possible letter arrangements of your Summary Code. (If your Summary Code includes a tie such as **RIEA**, you must look up more letter combinations and their arrangements.)

Similar Codes _____

Occupation	Education	Occupation	Education
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Some Next Steps

1. The SDS is most useful when it reassures you about your vocational choice or reveals new possibilities worthy of consideration. If it fails to support a choice or an anticipated job change, don't automatically change your plans. Instead, do some investigation to make sure you understand the career you have chosen and the occupations suggested by the SDS.
2. Compare your Summary Code with the codes for your Occupational Daydreams on page 3. They should be similar, but it is not necessary that your SDS code matches your aspirational or job code—letter for letter. Occupations tolerate a variety of types. It is important that your three-letter code at least resembles the three-letter code of your favorite occupational choice. For example, your SDS code is **RIE**, and the occupation you aspire to is coded **IRC**. Other examples of strong to moderate resemblance would include occupational codes of **RIA**, **EIR**, **RSA**. If you can see no relation between your SDS code and your aspiration, you should examine your potential satisfaction for that occupation with a counselor or a friend.
3. Investigate the educational requirements for the occupations that interest you. Go back to The Occupations Finder and find out how much education or training is required for each occupation you listed earlier. Where could you obtain the required training? Is it financially possible? Is it reasonable in terms of your learning ability, age, family situation?
4. Consider any health or physical limitations that might affect your choice and how you can or would cope with them.
5. Seek more information about occupations from local counseling centers, school counselors, libraries, labor unions, employment services, and occupational information files (usually found in counseling offices). Talk to people employed in the occupations in which you are especially interested. Most people enjoy talking about their work. Remember, however, that they may have personal biases, so talk to several people in the same occupation. Try to obtain part-time work experience that is similar to the activities in the occupations you are considering. Read articles and books that describe occupations or attempt to explain current scientific knowledge about the choice of an occupation. Some suggestions are listed on page 13.
6. Remember that your results on the SDS are affected by many factors in your background—your sex, your age, your parents' occupations, and ethnic or racial influences. For example, because society often encourages men and women to aspire to different vocations, women receive more **S**, **A**, and **C** codes than men, while men obtain more **I**, **R**, and **E** codes. Yet we know that almost all jobs can be successfully performed by members of either sex. If your codes differ from your Occupational Daydreams, keep those influences in mind; they may account for the differences, and you may decide to stick with your Daydreams.
7. Remember: no one but you can make your vocational decision. Our knowledge of careers is too limited to provide you with a single, exact choice, but we can help you focus on some of the more likely possibilities.

Some Useful Books

- Anthony, R. J., & Roe, G. (1991). *Over 40 and looking for work?: A guide for the unemployed, underemployed, and unhappily employed*. Holbrook, MA: B. Adams.
- Bolles, R. N. (1994). *What color is your parachute? A practical manual for job hunters and career changers*. Berkeley, CA: Ten Speed Press.
- Carney, C., & Wells, C. (1991). *Discover the career within you* (3rd ed.). Pacific Grove, CA: Brooks/Cole.
- Farr, J. M. (1993). *The complete guide for occupational exploration*. Indianapolis, IN: JIST Works.
- Field, S. (1992). *100 best careers for the year 2000*. New York: Prentice Hall.
- Figler, H. (1988). *The complete job-search handbook*. New York: Henry Holt and Company.
- Gottfredson, G. D., & Holland, J. L. (1989). *Dictionary of Holland occupational codes* (2nd ed.). Odessa, FL: Psychological Assessment Resources.
- Harkavy, M. D. (1990). *101 careers: A guide to the fastest-growing opportunities*. New York: Wiley.
- Holland, J. L. (1992). *Making vocational choices: A theory of vocational personalities and work environments*. Odessa, FL: Psychological Assessment Resources.
- Hopke, W. E. (1993). *The encyclopedia of careers and vocational guidance* (9th ed.). Chicago: J. G. Ferguson Pub.
- Krannich, R. L. (1993). *Careering and re-careering for the 1990s* (3rd ed.). Manassas Park, VA: Impact Publications.
- Medley, H. A. (1992). *Sweaty palms: The neglected art of being interviewed*. Berkeley, CA: Ten Speed Press.
- Moore, D. J., with VanderWey, S. (1994). *Take charge of your own career: A guide to federal employment*. Odessa, FL: Psychological Assessment Resources.
- Need a lift? Educational opportunities, careers, loans, scholarships, employment*. (1993). Indianapolis: The American Legion. (These inexpensive booklets are published every year and may be ordered from The American Legion, National Emblem Sales, P.O. Box 1050, Indianapolis, IN, 46206.)
- Petras, K. (1993). *Jobs '94*. New York: Simon & Schuster.
- Savage, K. M., & Novallo, A. (Eds.). (1992). *Professional careers sourcebook* (2nd ed.). Detroit, MI: Gale Research.
- Shahnasarian, M. (1993). *Decision time*. Odessa, FL: Psychological Assessment Resources.
- Sher, B., & Gottlieb, A. (1979). *Wishcraft: How to get what you really want*. New York: Viking Press.
- U.S. Department of Labor, Bureau of Labor Statistics. (1992-1993). *Occupational outlook handbook*. Washington, DC: U.S. Government Printing Office. (This handbook is published every two years and is the best single source for information about occupations. See your counselor or library, or order from Superintendent of Documents, U.S. Government Printing Office, Washington, DC, 20402.)
- Witt, M. A. (1992). *Job strategies for people with disabilities: Enable yourself for today's job market*. Princeton, NJ: Peterson's Guides.