THREE KEY POST-SECONDARY OPTIONS FOR LEARNING DISABILITY STUDENTS AT CASA GRANDE UNION HIGH SCHOOL DISTRICT

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ABSTRACT

THREE KEY POST-SECONDARY OPTIONS FOR LEARNING DISABILITY STUDENTS AT CASA GRANDE UNION HIGH SCHOOL DISTRICT

SONYA FALANA HENDRICKS

The transition from high school to the post-secondary world for students with disabilities can be challenging. The ability to successfully identify these exclusive needs can determine the socio-economic trajectory for students with a learning disability. Fortunately, there are several post-secondary options available for the students upon graduation. These options include, but are not limited to, enrolling in community colleges or universities, participation in trade or vocational training programs, or entering competitive integrated employment. The purpose of this study is to examine whether relationships exist between survey results and demographics (gender, ethnicity, and disability) within the three key post-secondary options in the Casa Grande Union High School District in Casa Grande, Arizona. The knowledge gained from this study hopefully will help determine how Casa Grande Union High School District can decrease the gap when assisting students with post-secondary options. This could also improve the students chances of being self-sufficient and living successful lives.

Keywords: learning disability (LD), college, career technical training, competitive integrated employment

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

DEDICATION

I dedicate this dissertation to the descendants of Forrest and Marietta (King) Hendricks. I am proud to have achieved the highest level of formal education in my family. This achievement did not come without heartache and the pain of losing my brother Kenneth Hendricks on May 20, 2019, to gun violence and my sister Sakina Hendricks on March 23, 2022, from a rare form of uterine cancer. Aunt Gwendolyn Baker passed on February 21, 2023, from stage 4 kidney disease. Not to mention my other family members. I dedicate this doctorate to the family!

CHAPTER ONE: INTRODUCTION

Regardless of whether students have learning disabilities (LDs) or not, the transition from high school to the post-secondary world can be challenging. Indeed, leaving the familiar environment of high school, and transitioning into the “real world” can be, for many, quite disruptive. If this is the case for high school graduates without LDs, imagine what it must be like for those with LDs. The transition from high school to the post-secondary world for these students creates unique challenges. Given such difficulty, LD students are more likely to need special assistance while making the transition from high school to the post-secondary world. The ability to successfully identify these exclusive needs can determine the socio-economic trajectory of an LD student.

Fortunately, there are several post-secondary options available to LD students upon graduation. These options include, but are not limited to, enrolling in community colleges or universities, participation in trade or vocational training programs, or entering competitive integrated employment. The post-secondary option of an LD student is a crucial factor influencing how seamless a graduate’s transition will be. If a student chooses a post-secondary option that does not correspond with potentialities and capabilities, the student is likely to experience difficulties during this transitional process.

The purpose of this introduction is to acquaint the reader with the study presented herein and to provide a rationale for conducting the study. The first section of this introduction provides a background of the topic being considered, including a definition of LD proper, a history of the struggle for the rights of people with disabilities, including LD individuals, and an overview of the consequent and relevant legislation. The first section also provides a basic description of the setting in which the study takes place. The second section offers a brief statement of the problem that the study seeks to address. The third offers a brief statement of the study's purpose. The fourth section offers a rationale for the study, i.e., it discusses its significance, or why the study matters. The fifth section describes the theoretical framework that forms the basis of the study. The sixth section identifies the assumptions from which the study proceeds and the limitations of the study. Next, the research questions that guide the study are presented, and finally, a brief overview of the study is offered.

Background and Setting

What is a Learning Disability?

What is an LD? How are students with a LD to be distinguished from students who are not learning disabled? The Centers for Disease Control and Prevention (CDC; n.d.) offers guidelines that help educators and other relevant professionals determine how to identify a student with LD. Unlike children who are not learning disabled, who encounter difficulty engaging in schoolwork, the LD student will have trouble in specific areas of learning. These areas of learning fall within a range of symptoms, such as, reversal of letters, numbers, or words, or numbers (in this specific case, after a child has reached the age of seven); difficulty in identifying patterns; a difficulty in organizing objects based on their sizes and shapes; problems with remaining organized; problems understanding and adhering to instructions; difficulty remembering what was recently read; difficulty writing, reading, drawing, and cutting; problems with comprehending the concept of time; difficulty coordinating one's body movements; and difficulty determining the difference between left and right. The specific forms of LDs that a professional may commonly encounter include dyslexia (skills that affect writing, reading, and spelling), dyscalculia (difficulty performing calculations), and dysgraphia (impaired writing ability). Less common LDs include auditory processing disorder (APD), i.e., difficulty in processing sounds; APD), language processing disorder (LPD), or difficulty in assigning meaning to the groups of sounds that make up words, sentences, and narratives (Pennington et al., 2020). A visual perceptual disorder (VPD) affects a person's ability to understand visual information (Mammarella et al., 2021).

History

Samuel Kirk was the first known psychologist to employ the term "learning disability;" this helped educators to identify students with language, speech, reading, and attendant communication disorders from children with overt disabilities and those who exhibited no disabilities at all. Yet in identifying these disorders as disabilities, Kirk opened the door for advocates to fight for legislation, policies, and funding to provide support for these children.

However, the definition of the term has changed over the years. At first, it was defined in terms of a discrepancy between IQ and achievement. However, this definition began to be contested as early as 40 years ago. It then served as an exclusionary term, which prevented many from receiving well-needed services. It was not until the 2000s that schools could no longer use the discrepancy criterion as a reason for withholding services (Switzer, 2003).

The movement for equal rights for individuals with disabilities, including those with LDs, began in the 1960s and took the civil rights movement as its inspiration and model as a path forward. Before this, individuals with disabilities often suffered negative stigmatization and denied access to human fundamental rights. With the advent of the civil rights movement, advocates for people with disabilities saw an opportunity to join with other groups, which allowed them to shed light on this underserved community. The *Brown v. the Board of Education of Topeka, Kansas* (1954) and *Pennsylvania Association for Retarded Citizens (PARC) v. The Commonwealth of Pennsylvania* (1972) court decisions were particularly influential. The *Brown* decision, in which racially segregated schools deemed unconstitutional, provided activists with an opportunity to advocate for legislation that would prevent the segregation of and discrimination against individuals with disabilities in the school and the workplace. The *PARC* decision was particularly important because it held that disabled students should attend public school with non-disabled peers rather than segregate these students into special schools or classrooms (Rodriguez & Murawski, 2020).

One of the key disability activist organizations that has been instrumental in fighting for the equal rights of individuals with disabilities is Disabled in Action (DIA). In 1972, close to fifty members of DIA held a protest in the middle of one of Manhattan's busiest streets to renounce President Nixon's decision to veto a bill that would provide individuals with disabilities with equal protection under the law. Additional protests took place in Washington, DC, Berkeley, California, Champaign, Illinois, Boston, Massachusetts, and other cities around the country for 11 months. In the end, President Nixon responded by signing the Rehabilitation Act of 1973. A key portion of the Act, Section 504, ensured that individuals with disabilities had equal access to services, programs, and federal funds (Switzer, 2003).

The Rehabilitation Act of 1973 followed by The Education for All Handicapped Children Act of 1975 (EHA). This act considered the landmark legislation that pertains to the education of children with disabilities. The law explicitly granted all children and adults aged 3 to 21 the right to an education that was not only appropriate but also free. In 1990, the name of the act changed to the Individuals with Disabilities Education Act (IDEA). During that same year, the Americans with Disabilities Act (ADA) passed (Switzer, 2003). Title I of ADA protects individuals with disabilities from discriminatory hiring and termination practices.

Furthermore, Title I requires an employer to provide reasonable accommodation to qualified individuals with disabilities who are employees or applicants for employment unless doing so would cause undue hardship.

Title II mandates that federal-funded public entities do not discriminate against individuals with disabilities. Title II applies to state and local governments including state executive agencies, courts, legislatures, towns, cities, counties, school districts, universities, community colleges, water districts, special purpose districts, regional transit authorities, and other state and local governmental organizations and AMTRAK. Notably, Title II applies to public schools and public universities.

Title III of the ADA requires places of public accommodation and commercial facilities designed, constructed, as well as modified in compliance with the ADA accessibility standards. The places of public accommodation include hotels, restaurants, theaters, hardware stores, etc. However, there is also an "undue burden" rule, which holds that under certain situations, certain businesses may be exempt from compliance.

The telecommunications portion of the ADA pertains to access to telephone and television for individuals with hearing and speech disabilities. Title IV of the Act mandates that telephone companies provide continued services that permit individuals with hearing and speech impairments to communicate over the telephone through a teletypewriter. Furthermore, Title IV mandates that public service messages funded by the federal government be closed captioned, i.e., displayed as text on the television screen (Switzer, 2003).

The Education for All Handicapped Children Act of 1975 (EHA) was created to address education for children with disabilities, visible and hidden. In 1990 the name of the EHA changed to IDEA. IDEA operates based on six fundamental principles pertaining to the rights of students with disabilities and the responsibilities of public schools. The first is that students with disabilities have a right to an education that is appropriate and free of charge. This means that special education and associated services are to be provided at no cost. The second pertains to student evaluation; each student is entitled to an appropriate and accurate evaluation. The third holds that each student is entitled to have an education plan that has been individually tailored to meet the student's needs.

Accordingly, students with disabilities that qualify for special education services will have a developed Individualized Education Plan (IEP) during their elementary and middle school years. When students with disabilities reach the secondary level, they will still receive academic services required by the IEP. However, emphasis is also placed on imparting non-academic skills that help the student succeed at the post-secondary level. The fourth maintains that education should take place in the least restrictive, yet most appropriate environment possible. This means that the environment must provide the student with access to all support and services necessary for the student to effectively learn and fully participate in the educational experience.

The fifth holds that parents or guardians have the right to participate in educational decision-making as it pertains to children. Finally, the sixth fundamental holds that procedural safeguards are in place to protect the rights of parents and the child whereby disputes can be resolved swiftly and fairly. IDEA provides several dispute options (Rodriguez & Murawski, 2020).

The IDEA Act does not apply to higher education. Rather, it focuses on elementary and secondary education. It is important to note that laws such as the ADA and Section 504 of the Rehabilitation Act are in place to provide individuals with disabilities access to education and prohibit schools from engaging in discriminatory practices (Rodriguez & Murawski, 2020).

Setting

This study took place in Casa Grande Union High School District, which is in Casa Grande, Arizona. The City of Casa Grande has an estimated population of around 61,000 residents. It is the 16th largest city in The State of Arizona and the 617th in the United States.

There are two public Title I schools accredited in the district dedicated to serving grade levels 9 through 12, namely, Casa Grande Union High School and Vista Grande High School, each of which serve around 2,000 students. The district has a special education services department which is known as Exceptional Student Services that is devoted to creating and administering programs that serve the needs of students with disabilities, including LD students, between the two high schools.

Moreover, the department utilizes data to determine the level of instruction that students require and review the available options with an emphasis on providing such instruction in the least restrictive environment. The options considered include reasonable accommodations and, where necessary, modifications, assistive technologies, transportation, counseling, physical therapy, occupational therapy, and speech and language therapy. The needed services for each LD student are determined by the IEP team. Students with disabilities will only be removed from the general population educational environment if the disability has been found to prevent the student from receiving a satisfactory education, even after assistance has been provided.

Problem Statement

Unfortunately, it is not clear as to whether LD students who comprise the population will attend college or university, trade, or vocational training, or enter the workforce. If a less appropriate post-secondary option is selected, a student’s transition to post-secondary life may be less than optimal. This study will focus on the three key post-secondary options chosen by LD students as well as the relationships between survey results and demographics (gender, ethnicity, and disability).

Purpose of Study

The purpose of this study is to examine whether relationships exist between survey results and demographics (gender, ethnicity, and disability) within the three key post-secondary options in the Casa Grande Union High School District in Casa Grande, Arizona.

Significance of Study

Up to this point there has been little research done to examine the three key post-secondary options for LD students. Research has instead focused on students with disabilities in general and not specific needs to enter post-secondary options. As a result, there is a gap in the research that needs to be addressed. Although this study is not definitive by any means, the results of this study nonetheless represent an effort to fill the gap. More immediately, the results can be used to get a sense of whether students within the Casa Grande Union High School District are fully aware of the three-key post-secondary options, the adequacy of options and opportunities to provide additional resources and whether additional options and resources need to be deployed are needed.

Furthermore, the results of the study can evaluate the transition objectives as per each student's IEPs to determine successes, and deficiencies and most importantly, the results can serve as a catalyst for future research.

Theoretical Framework

The theoretical framework for this study is Schlossberg's Transition Theory. Also known as Adult Development Theory, Schlossberg's Transition Theory, as the term suggests, was developed by counseling psychologist Nancy K. Schlossberg, and was first developed to offer a systematic framework that would help therapists understand adults undergoing a life transition to properly assist students to cope with the common and even exceptional life processes. Although Schlossberg's theory was initially developed to address the transition challenges of adults, it is nonetheless applicable to young adults transitioning from high school to the post-secondary world.

According to Schlossberg's theory, there are three types of transitions an adult may experience. One type of transition is that which has been anticipated, i.e., transitions that the person expects to occur. They thus are no surprise to the person. A relevant example of such an event is graduating from high school. A student knows in advance that this event is occurring and can plan for it accordingly. On the other hand, there is a second type, the unanticipated transition. These are transitions that the person had no idea would occur. Examples of such a transition include immediate termination from a job, the sudden death of a beloved party, or a divorce. Finally, there are non-event transitions that the person expected to occur but that did not happen. Examples include an engagement that ends before marriage has occurred or a job offer that does not materialize.

It should be noted that a particular event or non-event may be associated with a transition, a transition is a process that takes place over time. At its initial onset, the person takes on a new role, which occupies their attention. Slowly, the person will begin to let go of the old role and establish a different role as well as new assumptions, routines, and relationships.

Goodman et al. (2006) asserts that the process of transitioning consists of three stages. The first stage consists of what Goodman refers to as "moving in," "moving through," and "moving out." "moving in" requires the individual to become familiar with new rules, expectations, and norms, all of which are demanded by the new situation into which they are transitioning. “moving through,” the second stage, requires the individual moving into a situation to become familiar with the demands of that situation and accommodate them accordingly. “moving out,” the final stage, refers to the stage in which the transition is coming to an end, and which provokes the individual to entertain what may transpire next.

According to Goodman, an individual enters a transition with assets that help the person navigate the transition and liabilities that hinder such navigation. Assets may outweigh liabilities, adjusting easily or liabilities may outweigh assets making the transition more difficult to manage. An individual’s appraisal of a transition as positive, negative, or neutral may also impact how the person feels and copes with the transition.

What are the factors that impact a person’s ability to effectively cope with a transition? According to Goodman et al. (2006), there are four key factors. The factors are referred to as the 4S: situation, self, support, and strategies. The first factor, the individual’s situation, will vary based on (a) what precipitated the transition (b) the time at which the transition takes place, (c) the extent to which the individual can exert control over the transition (d) the new roles that the individual will be required to take on (e) how long it will take for the transition to occur (f) how much experience the individual previously had with a transition similar to the current one (g) the individual’s assessment of the transition (h) additional stresses that the individual experiences as a result of the transition.

The second factor, self, includes the personal, psychological, and demographic characteristics and resources the individual possesses and brings to the transition. Personal and demographic characteristics include gender, age and stage of life, ethnicity and culture, socioeconomic status, and level of health, all of which have an impact on the individual’s perspective on the world. Psychological resources consist of the individual's outlook on life, personal values, level of ego development, resiliency, and spiritual moorings.

The third factor is the support that the individual has during a transitioning experience plays a significant role in determining how well the individual can adjust to the transition. Sources of support include friends, loved ones, institutions, and the community. Support may take the form of aid, feedback, assurance, or emotional support.

Finally, strategies are the plans and methods devised by the individual to cope with a transition. There are three ways to cope with a situation: change the situation, take control over the situation's meaning, and stress management. According to Goodman et al. (2006), the best way for individuals to cope is for them to be flexible and utilize strategies concurrently.

Definition of Terms

Learning disability (LD): a condition in which a student will have trouble in, at minimum, one area of learning that falls within a range of symptoms, e.g., reversal of letters, numbers, or words, or numbers; difficulty remembering what was recently read and/or with writing, reading, drawing, and cutting, etc. Forms of LDs include dyslexia, dyscalculia (difficulty performing calculations), and dysgraphia (impaired writing ability), APD and LPD.

Invisible or hidden disabilities: Disabilities that do not manifest obvious outward or physically observable signs. LD's fall into this category.

Schlossberg's transition theory: A theory which purports that there are three types of transitions an adult may experience. Anticipated transitions, which are known in advance, unanticipated transitions, which are not known in advance, and non-event transitions, which are transitions that the person expected to occur, but did not.

Post-secondary world: The world beyond high school, i.e., the world of work or post-secondary education (e.g., college or career and technical education).

Post-secondary career and technical education (CTE): An educational option that provides high school graduates with the academic and technical skills needed to obtain employment in the market for jobs that are in demand without attending a college or university.

Competitive integrated employment (CIE): According to the Workforce Innovation and Opportunity Act (WIOA), competitive integrated employment consists of work performed by individuals with disabilities for which they receive pay at or above minimum wage and comparable to that paid to employees with comparable training and experience, receive the same benefits and advancement opportunities provided to non-disabled employees holding similar positions.

Supported employment: An intervention that provides individuals with disabilities with the support they need to be successful at a job.

Assumptions and Limitations

Assumptions

This study proceeds based on several assumptions. The first and most fundamental of these assumptions is that the respondents will answer questions honestly and truthfully. This is a crucial factor that can impact the validity of the study. Students are aware that the results of the study could be used to improve the way in which future LDs students can manage the transition from high school to the post-secondary world.

The second assumption is that students will fully understand the questions being asked. Steps have been taken to ensure that the questions are straightforward, plain, and easy to comprehend. As a result, it is not expected that the respondents will experience any difficulties comprehending any of the study's questions.

A third assumption is that a post-secondary education can improve the lives of LD students' post-graduation. This assumption is supported by research conducted by the Federal Reserve Bank of New York (2022), which found that the greater the level of educational attainment, the higher a person's income will be. Research shows that the more education workers have, the more likely they are to retain employment, keep a job and pertinently, more likely to be given the option of working remotely during the COVID-19 pandemic compared to that of workers with less education (Carnevale et al., 2021). Although the college enrollment rates of LD youth with LDs have increased, LD youth remain persistently underrepresented on college and university campuses relative to their non-disabled peers. In addition, LD student college and university graduation rates have either stagnated or remained low (Scheef et al., 2018).

However, college is not the only educational option available to LD students. There is also the option of post-secondary technical school. Indeed, it is notable that graduates of post-secondary technical schools tend to make more than their high school counterparts, and at times, on par with or more than college graduates (U.S. Bureau of Labor Statistics, 2021).

Limitations

This study has several limitations. For one, its scope is limited to LD students who have graduated high school. As a result, the perspectives of graduates with different disabilities have not been considered. In addition, the scope of the study is limited to one high school district in Arizona.

The way the participants are selected in the study also limits the extent to which the results can be extrapolated to different populations. The mode of sampling used in this study selected the participants because they possessed a particular set of characteristics or fit a particular profile; in other words, to participate in the study, a person had to have a LD and have graduated from a high school in one district, namely the Casa Grande Union High School District. Those who do not fit the profile are rejected. Accordingly, the results of a study using this method cannot be generalized to a broader population that possesses the same characteristics.

Although the sampling method used in this study limits how the results may be used, this method was nonetheless selected for a good reason. This study is cost effective mainly because the population in question is relatively small, which makes it possible for the study to include an accurate sample of the intended population. This strengthens the validity of the study within the boundary of the study's limits. In other words, there is no doubt that the results are applicable to the intended population.

Furthermore, to conduct and select a sample that was representative of a larger population would have been considerably more costly and diluted for its intended purpose Nevertheless, the fact remains that the results of this study cannot be extrapolated to the general population of individuals with disabilities, within or outside the Casa Grande Union High School District, nor can they be extrapolated to LD graduates outside of the district.

Research Questions

The study presented herein has three purposes. The first is to examine whether relationships exist between survey results and demographics (gender, ethnicity, and disability) within the three key post-secondary options in the Casa Grande Union High School District in

Casa Grande, Arizona. The second is to determine if there is a difference between participants ethnicity and survey results. Third, is to find out if there is a difference between the participants' disability category and survey results?

Brief Overview of the Study

A previously noted, this study fundamentally seeks to determine the extent to which LD students within the Casa Grande Union High School District who recently graduated high school are aware of the various post-secondary options. Moreover, it seeks to determine which options have been selected by graduates and the relationships within the survey results. There are several unknown factors that influence an LD student's selection process. Do these graduates tend to make choices that will help them lead a self-productive life? Do they tend to select the options that are most appropriate for them that will end in a certificate or diploma? Are the selections that are made more or less likely to make their transition into the post-secondary world as smooth as possible? These are the questions that this study seeks to address.

With regards to the methodology used in this study, the study utilizes a descriptive quantitative research design. This design is most appropriate because it serves to fulfill the fundamental purpose of the study, which is to obtain specific information about a phenomenon (i.e., the options selected by LD graduates) in a manner that is systematic. Accordingly, this study makes use of a particular form of measuring instrument, namely, a structured survey instrument. This instrument exclusively makes use of how much you will agree or disagree to the questions, i.e., questions that the respondent will answer on a scale from one to ten. This form of instrument requires the formulation of questions that are precise and tightly formatted. As a result, the answers the respondents provide are less likely to be unclear or ambiguous. Examples of closed-ended questions include multiple-choice questions that only provides the respondent the option of a single-word response, a question that only permits the respondent to respond, 'yes' or 'no,' or a question that only allows the respondent to provide an answer based on a rating scale. The survey scale will also represent a set of answer options in a numeric form. The Likert scale survey will also consist of a 0–10-point scale for the first three questions.

As noted above, this study utilizes a sampling method that allows the researcher to make clear conclusions about the specific population under study. However, it should be reiterated that the results only apply to that population. Nevertheless, the results should provide insights into an area of research that remains, up to this point, inadequately explored.

Summary

Although one of the purposes of this study is to modestly address a gap in the available research, the results of this study should not be considered the last word about the transition of LD high school graduates to the post-secondary world. Nor should it be considered the last word on how aware these students are of what their available options are or the last word on the decisions made regarding these options.

Rather, this study is meant to be a small step in addressing the research that specifically deals with the transition challenges that LD high school graduates encounter. Most of the research has thus far focused on individuals with disabilities in general who are recent high school graduates and their transition options and challenges. Although many students experience anxiety while transitioning after high school, the transition of that of an LD student can be exacerbated without proper guidance and support. LD students face challenges that are unique to their specific condition and experience. It is the hope that results from this study will help school administrators in the district in question determine how the district can improve the way in which it informs their students of their post-secondary options to make the most appropriate choices. In turn, this process increases the chances of success for LD students in the workplace and in life.

Furthermore, it is hoped that the study will inspire others to conduct additional research in this area.

CHAPTER TWO: LITERATURE REVIEW

As noted in the introduction, the proposed study seeks to determine the extent to which high school attendees with LDs within the Casa Grande Union High School District are cognizant of the post-secondary options that are available, the options that these students have selected, and the relationships between the participants and the survey results. The purpose of this section is to present a review of the relevant literature, which is literature pertaining to the post-secondary options available to high school students with LDs.

The first section provides a background of the topic. The second section looks at the literature pertaining to the challenges facing individuals with disabilities in the workplace. The third section reviews the literature that has been investigated for the post-secondary college or university education option and its viability for high school graduates with LDs.

Background

What does it mean to be a LD student? According to the CDC (n.d.), whereas many children may occasionally find school difficult, a student with LD will have trouble in at least one specific learning area. A student with LD may exhibit one or more of the following symptoms: difficulty determining the difference between right and left; reversal of letters, words, or numbers (after the age of seven); difficulty identifying patterns; difficulty organizing items according to shape or size; difficulty staying organized; difficulty comprehending and following instructions; difficulty remembering what was recently said or read; difficulty writing, reading, cutting, and drawing; difficulty understanding the concept of time; and difficulty coordinating body movements. The most common of LDs include dyslexia (problems identifying speech sounds and relating them to letters and words, impeding the student’s ability to read), dyscalculia (difficulty performing calculations), and dysgraphia (impaired writing ability; (Horowitz et al., 2017).

There are additional, though less common, LDs that an educational professional may encounter. One such LD is APD. APD is a LD that is characterized by difficulty in processing sounds. Accordingly, individuals with APD may not be able to distinguish between different sounds or may confuse the order of sounds. Another LD that may be encountered in an educational context is LPD. This condition is characterized by difficulty assigning meaning to the groups of sounds that constitute words, sentences, and narratives, thereby affecting expressive and receptive language (Pennington et al., 2020).

Nonverbal learning disabilities (NVLDs) is another category of LDs. NVLDs are LDs that make it difficult for individuals to comprehend body language, tone of voice, facial expressions, or other nonverbal forms of communication. A VPD (also referred to as visual perceptual or visual motor deficit) is a LD that impacts a person's ability to comprehend visual information. Individuals with this condition will have poor hand-eye coordination, will lose one's place while reading, and will find it difficult to engage in fine motor activities, such as handling pencils, scissors, crayons, and the like (Mammarella et al., 2021).

It should be noted that behavioral or emotional disorders may also be co-present in individuals with LDs. Such disorders include anxiety or attention-deficit/hyperactivity disorder (ADHD). The presence of such disorders can further interfere with a student's ability to perform academically (Pennington et al., 2020).

Although students may exhibit the symptoms characteristic of a LD, the presence of such symptoms are not indicative of a student's level of cognitive ability; nor does it indicate a lack of student motivation. Indeed, an LD student may possess exceptional cognitive ability and may exhibit an important level of academic motivation. In fact, LD students have been known to possess notable gifts. As Gierczyk and Hornby (2021) note, such students, referred to as “twice gifted,” can demonstrate the potential for high achievement or creative productivity in one or more domains such as math, science, technology, the social arts, the visual, spatial, or performing arts, or other areas of human productivity, all while, exhibiting “one or more disabilities as defined by federal or state eligibility criteria. (p. 1)

Thus, an LD student may very well have the potential to perform well in inclusive education environments. However, to facilitate these students’ success, it is essential that they are provided access to the appropriate instruction strategies and programs.

Prior to the advent of the programs delineated by the IDEA, students with LD were often subject to stigmatization and on the receiving end of pejoratives. Students with LDs were commonly referred to as “lazy” and “slow,” and were often misdiagnosed as intellectually disabled. Furthermore, students with LDs were typically denied access to an education and, as a result, were denied the opportunity to receive a high school diploma and thus access to the benefits that a higher education affords. Indeed, laws in several states prevented children with specific disabilities from attending public school, particularly those to whom the label “emotionally disturbed” or the pejorative “mentally retarded” was affixed. In the cases in which LD students were allowed to attend school, these children were segregated into spaces where they were provided with insufficient, if any, instruction.

Fortunately, with the passing of IDEA in 1975, things changed. With the advent of this legislation, students ages 3 to 21 who have been diagnosed by a professional to have a disability that has been determined to adversely impact a student’s ability to perform academically must be provided with free compensatory education as well as related services. This applies to all disabilities, including LDs (Thornton, 2020).

What prompted this change? The birth of the civil rights movement, advocates for people with disabilities saw an opportunity to unite with other oppressed groups to demand that their constituency be accorded equal opportunity, equal access, and equal treatment. Two U.S. Supreme Court cases were particularly important: *Brown v. The Board of Education of Topeka, Kansas* (1954) and *Pennsylvania Association for Retarded Citizens (PARC) vs. The Commonwealth of Pennsylvania* (1972). In the *Brown* case, the court determined that racially segregated schools were unconstitutional. This decision set the stage for legislation to be enacted to prevent the segregation of and discrimination against individuals with disabilities, students, and adult workers alike. In the *PARC* case, the court expressly held that it was preferable for disabled students to attend public school with their non-disabled peers than to segregate these students into special schools or classrooms (Rodriguez & Murawski, 2020).

According to the IDEA, public schools must provide special education and related services to qualifying students according to an IEP, which is to be designed specifically for each student. One aspect of the IEP is post-secondary transition planning. Such planning is mandated by the IDEA and the Rehabilitation Act of 1973, as amended by Title IV of the WIOA, to begin once a student with any disability reaches age 16 (U.S. Department of Education, 2020). However, it should be noted that the school has the option of beginning such planning as early as it deems necessary to make sure that the student receives the skills and services required to transition to life beyond school (Rodriguez & Murawski, 2020).

Over the past 10 years, knowledge about what practices facilitate the transition of high school graduates with LDs into a post-secondary life has increased significantly. One of the most important findings is that it is imperative that high school students with LDs are solidly prepared at the academic level. However, strong academic preparation alone is insufficient. Such preparation must be accompanied by transition planning, the involvement of family members, youth empowerment, the linking of various transition resources and programs activities that connect transition resources, and work experiences to promote positive outcomes. Notably, paid employment during the high school years has been found to be the strongest predictor of post-secondary employment success for students with disabilities, regardless of the nature of the student's disability or the degree to which the student has received special education services (Scheef et al., 2018).

Challenges Facing Individuals with Disabilities in the Workplace

Individuals with disabilities, including those with LDs, face certain challenges in the workplace, although the types of challenges they face may differ. As Horowitz et al. (2017) note, working-age individuals with LDs are two-times more likely to be unemployed than individuals who do not have disabilities. Moreover, they are two times as likely to have completely dropped out of the workforce. Thus, obtaining employment is a major challenge facing adults with LDs. Why is that so? Unfortunately, stigmatization remains a problem. Although LDs are "invisible" or "hidden" in that they are not manifested by obvious outward or physically observable signs, stigmatization becomes a very real possibility once it has been revealed that a person has an LD. As Ysasi et al. (2018) note, people can hold stereotypical attitudes toward individuals with hidden disabilities, may be fearful of them, and may believe that the attention they receive should not be prioritized based on the assumption that such individual may require the devotion of considerable time and attention. This is the principal reason individuals with invisible or hidden disabilities, including those with LDs, tend to not reveal their condition, especially in the workplace.

Additional factors may make it difficult for individuals with LDs to get work or remain employed. College graduation rates among individuals with LDs tend to be lower than individuals who do not have LDs. At the same time, increased employers require a college degree as a condition of employment. Furthermore, working-age individuals with LDs often are unaware of the accommodations that they can avail themselves of in the workplace, further making it difficult for these workers to perform successfully in the workplace. Unfortunately, the research on why there is such a disparity in employment remains insufficient. This is particularly notable given that "fully two-thirds of those with diagnosed LDs are not low-skilled in literacy, with some (around 6%) performing at the highest level (Ysasi, Becton, and Chen, 2018)."

At the same time, the disparity in employment, though present, is also considerably less among college graduates with LDs and in at least one study, the unemployment rate among these graduates was found to be slightly higher than the national unemployment rate (Horowitz et al., 2017). Nevertheless, close to 75% of participants stated that their LDs had an impact on their job. Notably, fewer than 10% asked for accommodation and some of the participants did not reveal to their employers that they had LDs. Some refused to reveal they had LDs out of fear of how such a disclosure would impact their relationships on their job, namely with managers, clients, or coworkers; while others stated that they did not self-disclose because they felt no need to do so (Ysasi et al., 2018).

Post-Secondary College or University Education: How Viable an Option?

There are three key possible post-secondary options available to high school students with LDs. One such option is to attend a post-secondary college or university education at the associate's or bachelor's level. Research has consistently shown that the greater the level of educational attainment, the greater the income (Federal Reserve Bank of New York, 2022). Carnevale et al. (2021), found that the more education that workers have, the more likely they are to keep their jobs and, pertinently, they are more likely to work remotely during the COVID-19 pandemic than workers with less education, although there are notable exceptions to this rule. Fortunately, the college enrollment rates of LD youth have increased. Unfortunately, LD youth remain persistently underrepresented in this area relative to their non-disabled peers. Furthermore, graduation rates among this population have stagnated or remained low (Scheef et al., 2018). Most students with disabilities lack self-advocacy skills which is a concern when transiting to higher education. Students with disabilities are not declaring their disabilities at higher education institutions at the same rate as required to in high school (Sachs & Schreuer, 2011). This problem impacts students with impairments because of not receiving the modifications and accommodations needed to perform successfully in college.

There are many factors contributing to this problem, among which includes a lack of student understanding regarding the process of registering their disability, the failure to do so out of shame of their disability, a fear of being labeled and stigmatized as a person with a disability.

According to De Los Santos et al. (2019), higher education institutions have tended to be unwelcoming to disabled students. This is notable considering that there has been litigation, court decisions, and a more accepting attitude on the part of the public. Often disabled students tend to be ignored by colleges and universities and become frustrated. This contributes to the difficulties disabled students have making the transition from high school to college and can negatively impact student achievement.

De Los Santos et al. (2019) conducted a quantitative, non-experimental study to investigate how disabled students' academic success, measured in terms of grade point average, was influenced by a student's registration with the disability office, use of accommodations, and use of institutional support and social support systems. The researchers surveyed 122 students. Notably, the results showed that not one of the variables investigated significantly predicted academic success. It is important to note that these results departed from findings of previous results, but there was a sample of findings consistent with previous data. One such result was that many disabled students failed to register with their school's office of disability. Indeed, only about 55 % of the study's participants were currently registered with the office of disabilities.

Furthermore, about 63% of participants were not receiving academic accommodation. De Los Santos et al. (2019) note that, according to the research, students who receive such accommodations are more likely to achieve academic success in college. In the end, the findings of this study indicated that students may not be receiving adequate services even if they are registered with the office of disabilities. Moreover, even if a student with a disability is registered with the office of disabilities and receives accommodations, the use of such accommodation does not significantly predict academic success. The researchers conclude that the findings indicate that the present way higher education institutions are determining students' need for accommodations and the implementation of those accommodations may be flawed and that the services students receive may be less than sufficient.

Post-Secondary Career Technical Education

Post-secondary career and technical education (CTE) is a second practical option that is available for LD students. According to the U.S. Bureau of Labor Statistics (2021), graduates of post-secondary technical schools tend to earn more income than their high school counterparts and, in certain instances, their incomes can be on par with or exceed that of college graduates (Durham & Bragg, 2019). In fact, many community colleges in the United States offer CTE programs. These programs allow students to earn certificates or diplomas, and depending on the area of study, these programs may last from 6 months to 2 years of study. CTE is also offered by for-profit colleges. Non-Profit organizations that are not affiliated with educational institutions also offer employment training programs (Stevens, 2019). Participants in CTE programs can achieve a sub-baccalaureate college credential (i.e., a certificate or associate degree) in a particular field of study. Although CTE is available to students at the high school level, federal legislation specifically defines CTE as education that leads to a post-secondary credential that is sub-baccalaureate.

The CTE option is not a new one. Indeed, in its earlier incarnation it was known as high school vocational education. However, the quality of education that students received was considered low and characterized by a lack of significant academic content and limited skill delivery, which restricted graduates to low-skill, low-wage employment. Indeed, many of the skills that students were taught were for industries and jobs that were on the decline. In addition, vocational education had a long history of tracking students who were perceived to be less likely to do well in mainstream classrooms. As such, vocational education began to become known as a mechanism that maintained or reinforced historical patterns of social stratification. A backlash ensued, resulting in the elimination of career preparation opportunities at the high school level (Stevens, 2019).

So how is CTE distinguished from its historical offshoot, vocational education? It is distinguished from it by a greater emphasis on academics, particularly at the sub-baccalaureate level, and by its provision of training in skills that are relevant to the present labor market.

Today, CTE is broadly considered not only to be a significant alternative to traditional 4-year colleges but also a fitting response to the skill demands of employers, thus serving as a means whereby high school graduates can increase their earnings (U.S. Department of Labor, n.d.).

As previously noted, CTE programs are offered at the high school level. Does prior exposure to such programs impact the ability of students to transition to life after high school? As Theobald et al. (2019) have noted, researchers have paid little attention to the factors influencing post-secondary outcomes for students with LDs using statewide data. This is notable given that the reauthorization of IDEA, which expressly sought to improve postsecondary outcomes for students with disabilities, took place more than a decade ago. Accordingly, Theobald et al. conducted what they maintain was the first statewide study to consider the relationship between CTE enrollment and post-secondary outcomes for students with LDs. Specifically, this study investigated whether CTE enrollment and inclusion was predictive of high school outcomes, measured in terms of on-time graduation for students with LDs, and whether CTE enrollment and inclusion was predictive of the postsecondary success, measured in terms of college enrollment and employment, of students with LDs. The sample consisted of more than 5,000 10th grade students who were receiving special education services for a specific learning disability (SLD) in Washington State public schools. The results showed that students with LDs who were enrolled in a cluster of high school CTE courses had higher rates of employment after graduation than similar students who were enrolled in fewer CTE courses.

During the past decade CTE programs have begun to stress Science, Technology, Engineering, and Mathematics (STEM) in their curricula. This change has been in response to a rise in demand for STEM workers which, as Deming and Noray (2019) note, are in short supply. This shortage, Deming and Noray demonstrate, is due to changes in technology which require workers to have newer, accommodating skills, and which render older skills obsolete. Moreover, they note that although individuals with applied STEM degrees initially earn high incomes, those incomes tend to deteriorate during the first decade of employment. The researcher's analysis of job vacancy data revealed that STEM jobs change rapidly over time, leading to a decline in worker earnings over time as skills become obsolete.

Gottfried, et al. (2021) note that although U.S. federal policy has been promoting the inclusion of STEM courses into high school curricula, there remains a paucity of research investigating who tends to enroll in these courses. Gottfried et al. (2021) conducted a study utilizing the High School Longitudinal Study, a nationally representative data set of high school students, to determine if the taking of CTE courses differed for students with LDs relative to students who were without disabilities. Notably, the results showed that students with LDs were more likely to earn more units in CTE courses than their non-disabled peers.

Pfeifer et al. (2021) note that self-advocacy is related to students with disabilities' college success. They define self-advocacy as the communicating of individual wants, needs, and rights in the pursuit of required accommodations. According to Pfeifer et al., little research has been conducted to determine how students with disabilities engage in self-advocacy. Accordingly, they conducted a study to determine the factors that support or impede self-advocacy in undergraduate STEM courses.

The study consisted of semi-structured interviews with 25 STEM majors with LD or ADHD. The results were segmented into two categories: inner factors and outer factors. Among the inner factors was self-advocacy knowledge. The components of self-advocacy knowledge consist of self-knowledge, knowledge of one's rights, knowledge of available accommodations, and knowledge of the context of STEM learning. The researchers found that sufficient self-advocacy knowledge was fundamental, providing support for other aspects of self-advocacy. Self-advocacy beliefs, i.e., students' view of their disability and their sense of responsibility for their accommodations and college success, were also an internal factor identified by the researchers. Students who had a positive view of their disability and showed responsibility for their success were more likely to engage in self-advocacy.

One external factor that Pfeifer et al. (2021) identified was assistance with accommodations by other individuals. These individuals included family members, peers, family, disability resource coordinators, and other professionals. The assistance these individuals provided included self-advocacy information and advice as well as emotional support. Another external factor was the classroom environment. Students reported that the environment of a single STEM course could either positively or negatively impact their self-advocacy. STEM instructors and their classroom policies had a significant impact on student self-advocacy.

Pfeifer et al. (2021) notes that although the number of students with disabilities enrolling in post-secondary college education has increased, there remains underrepresented students in (STEM) college majors. Furthermore, the number of students with disabilities who graduate with degrees in a STEM major tends to be fewer than those without disabilities, to initially pursue a STEM major. Why this is so is unclear. However, they suggest that the difference in the laws applicable to students with disabilities depending on whether they are attending high school or college appears to be a factor. For example, at the high school level, IDEA and other laws require schools to identify and accommodate students with disabilities to help them achieve academically. However, at the college level, the ADA and Section 504 of the Rehabilitation Act of 1973 require students to assume sole responsibility for their accommodations. This is problematic since many students with disabilities have never had to be responsible for their accommodations prior to attending college and thus may find accessing them difficult, thus impacting their ability to successfully complete STEM and other college programs.

Competitive Integrated Employment

Another option available to students with LDs upon graduation is competitive integrated employment (CIE). What is CIE? According to the WIOA, CIE refers to the following: (a) work performed by individuals with disabilities, the latter receiving compensation at or above minimum wage and at a rate comparable to that paid to employees who perform comparable duties and who possess comparable training and experience; (b) work in which individuals with disabilities receive the same benefits provided to non-disabled employees holding similar positions; work that provides advancement opportunities for advancement similar to that of non-disabled employees holding similar positions (U.S. Department of Labor, n.d.).

For students with LD to successfully engage in CIE, it is essential that they become empowered to identify, plan for, and obtain the necessary support. When students and their families collaborate with educators, personnel from relevant local agencies and businesses, the likelihood that these students will be employed increases. Furthermore, the kind of support that the student receives, both at work and off site, is a determining factor in whether the student will be successfully placed in a job (Luecking, 2019).

It is imperative that CIE options are individualized and matched with students' skills, interests, preferences, needs, and the labor needs of businesses. The needs and employment objectives will be different for each student. Linking student's skills, interests, preferences and needs with the needs of businesses help facilitate the brokering of good employment matches, i.e., matches that result in outcomes that are mutually beneficial for students and a particular business (U.S. Department of Education, 2020).

Over the last 25 years, public policy has focused on funding and providing services that promote CIE. For example, in 1999, the Supreme Court made what many consider to be the most crucial decision affecting the civil rights of individuals with disabilities to be made in the history of the United States. That decision, Olmstead decision, rested on the ADA. Passed in 1990, the ADA prohibits discrimination against any individuals with disabilities in all places, public and private, that are open to the public. That includes schools, places of employment, and transportation. Most notably, the Supreme Court in the Olmstead decision held that all individuals with disabilities have a right to receive support and services funded by the state in the community rather than in institutions. However, to qualify for such supports and services, three conditions must be met, namely: the professional providing treatment for the individual with a disability must determine that such supports are applicable; the individual must agree to live in that community; and the services provided must be a reasonable accommodation when compared to other individuals with disabilities who reside in the community (Rodriguez & Murawski, 2020).

CIE has been found to be not only a preferred policy outcome but an outcome that is broadly possible. This is so even for individuals with significant disabilities. There is research available spanning several decades that has determined how CIE can be achieved. Case in point: supported employment (SE) has been found to be an intervention that is highly effective while promoting CIE for individuals with disabilities. SE eliminates pre-employment training that is usually received in segregated facilities. Instead, individuals are immediately provided with opportunities to gain experience on-the-job and are given the support they need to be successful. An extension of SE, customized employment, is another intervention that eliminates pre-employment training and provides support for individual workers (Luecking, 2019).

Summary

Research has shown that the more education workers have, the more likely they are to become employed and remain employed. The three key possible post-secondary options available are post-secondary college or university education at the associate's bachelor's level, CTE, and CIE. Although the college enrollment rates of LD youth have increased, LD youth still are underrepresented in this area and graduation rates among this population have stagnated or remained low. This is at a time when many employers require a college degree as a condition of employment.

CTE is a second possible and quite viable option that is available for LD students. Notably, CTE graduates tend to earn more income than regular high school graduates and, in some cases, make as much or more than college graduates. Another option available to students with LDs is CIE. CIE, as defined by WIOA, has three characteristics. First, it consists of work performed by individuals with disabilities that pay at or above the minimum wage and at a rate comparable to those who engage in comparable work and have comparable training and experience. Second, it is work in which individuals with disabilities receive the same benefits provided to non-disabled employees who have the same jobs. Third, CIE offers workers with disabilities the same opportunities to advance in the workplace that are available to non-disabled employees with similar jobs.

In the next section, a description of the methodology that will be used in the present study will be presented. More specifically, the next section will describe the approach that will be taken in the study. Furthermore, it will describe the research design that will be utilized, the individuals who will participate in the study, and the procedures that will be taken.

Chapter Three: Methodology

The purpose of this chapter is to present the research method that will be used to examine if there is a difference between survey results and demographics (gender, ethnicity, and disability category) within the three key post-secondary options in the Casa Grande Union High School District in Casa Grande, Arizona.

The chapter begins with a reiteration of the research problem that the study will investigate. It is followed by an articulation of the purpose for which the study will be conducted.

In the next section, the research questions that will be used to guide the research are presented. After that, the actual methodology that will be used in this study is presented. The next section presents and explains the research design. This is followed by a discussion of the population from which the sample is to be selected, an explanation of sampling options, and the sampling method that will be used.

The next section discusses the nature of the instrument that will be used to gather the data for this study. The final sections discuss the data collection and the data analysis procedures to be used in the study and will consider relevant validity issues.

Restatement of the Problem

The transition from high school to the post-secondary world can be very demanding for students who have just recently graduated. This is particularly the case when it comes to such students who live with LDs. It is therefore more likely that these students will need at least some assistance in making that transition.

Fortunately, LD students have a variety of options available to them when they graduate from or leave high school. These options include community college or university attendance, technical or vocational training, and CIE. However, for LD students to optimize their transition from high school to the post-secondary world, particularly the world of work, these students must select the option that is most suitable for them as individuals. Why is this crucial? It is crucial because if students select an option that is not best suited for them as individuals, each student's transition to post-secondary life is more likely to be more challenging than necessary.

For an LD student to select the best post-secondary option available, the option that is best suited for the individual based on individuals needs and characteristics, it is imperative that the student possess as much knowledge of the options available as possible. Yet the extent to which LD students are aware of their options, particularly those who recently graduated school in the Casa Grande Union High School District, remains unknown. Unfortunately, it is not clear as to whether LD students who comprise the population will attend college or university, trade, or vocational training, or enter the workforce. This study will focus on the three key post-secondary options chosen by LD students as well as survey results and demographics.

Research on the post-secondary choices of LD students, in general, is significantly lacking, with many studies focusing on the actual options (e.g., a college or university education at the associate's or bachelor's level, CTE, or CIE) and their associated outcomes. As a result, there is a glaring gap in the research, a gap that needs review.

Purpose of the Study

The purpose of this study is multi-faceted. First, this study will examine whether a relationship exists between the three key post-secondary options and survey results from LD students who have graduated from a Casa Grande Union High School District. Second, this survey will examine the correlation between survey results and gender. Third, survey results and ethnicities. Finally, determine whether there is a difference between the participants' disability category and survey results within the three key post-secondary options. In the end, the knowledge gained from this study will help determine how the school district can decrease the gap when assisting students with post-secondary options. This could improve their chances of being self-sufficient and living successful lives. Moreover, the results could point the way for more research that could address the research gap.

Research Questions

Fundamental to any research project is the development of research questions. The development of the right research questions is crucial for a variety of reasons. For one, it helps guide the researcher in making decisions about how to approach a study. It particularly helps the researcher make decisions about which research design to employ and what kind of data needs to be acquired and subjected to analysis. These are key decisions that determine whether the research study will investigate what the researcher intends to investigate. However, for these questions to serve their purpose, they must be well-defined and specific (Creswell & Creswell, 2018).

It is important that the research questions are spurred by a deficit of knowledge in a particular area. As noted above, there is a dearth of research investigating the post-secondary choices of LD students in general when they leave high school and among such students from the Casa Grande Union High School District. Accordingly, this study will address the following research questions.

The study presented herein has three purposes. The first is to examine whether relationships exist between survey results and demographics (gender, ethnicity, and disability) within the three key post-secondary options in the Casa Grande Union High School District in Casa Grande, Arizona. The second is to determine if there is a difference between participants ethnicity and survey results. Third, is to find out if there is a difference between the participants' disability category and survey results?

RQ 1 Is there a difference between participant gender and survey results?

H_0 There is no difference between participant gender and survey results.

H_A There is a difference between participant gender and survey results.

RQ 2 Is there a difference between participant ethnicity and survey results?

H_0 There is no difference between participant ethnicity and survey results.

H_A There is a difference between participant ethnicity and survey results.

RQ 3 Is there a difference between participant Disability Category and survey results?

H_0 There is no difference between participant Disability Category and survey results.

H_A There is a difference between participant Disability Category and survey results.

The following data table aligns the research questions along with their associated variables, levels of measurements, and statistics.

Table 1

Research Questions, Levels of Measurements, and Statistics

Research Question	Variables and Level of Measurement	Statistics
RQ 1 Is there a difference between participant Gender and survey results?	IV: Gender (Categorical) DV: Survey Results (Continuous/Quantitative)	Descriptives (Mean, Median, *SD*) Inferential (One Sample t-test)
RQ 2 Is there a difference between participant Ethnicity and survey results?	IV: Ethnicity (Categorical, 3 or more) DV: Survey Results (Continuous/Quantitative)	Descriptives (Mean, Median, *SD*) Inferential (One-way ANOVA, Tukey, effect size)
RQ 3 Is there a difference between participant Disability Category and survey results?	IV: Disability Category (Categorical) DV: Survey Results (Continuous/Quantitative)	Descriptives (Mean, Median, *SD*) Inferential (ANOVA, Tukey, effect sizes)

Research Methodology

Available Approaches

There are three research approaches available to education researchers: (a) the quantitative approach (b) the qualitative approach and (c) the mixed methods approach (Creswell & Creswell, 2018). The purpose of this section is to provide an overview of these approaches and, in that light, reveal the approach that has been selected for this study and discuss why it was selected. As will be shown, a selected approach must fit the nature of the research endeavor. That is, the researcher must select the most suitable approach, depending on that which the research seeks to investigate.

The Quantitative Approach

A quantitative approach, as this term indicates, places emphasis on quantities; meaning, the amount of something, specifically as measured in terms of numbers. More precisely, the quantitative approach utilized to determine “how much,” how many” and/or “how often.” In the end, the reason for using a particular quantitative research approach is to generate numerical data. Once such data has been generated, it is submitted to statistical analysis, whereby trends and regularities are uncovered (Creswell & Creswell, 2018).

The Qualitative Approach

Whereas a quantitative approach is used to generate hard numerical data that is to be analyzed using statistical methods, qualitative approaches are characterized by a flexibility that permits the researcher to respond to the changes in the conditions of the study that may take place while the study is being conducted, changes that yield new and unexpected information. When added information emerges, the researcher can adapt and include that information in the study. Thus, whereas the data collection process that takes place using a quantitative approach used to acquire specific data, qualitative data collection is not so confined. Furthermore, while the quantitative researcher can only conduct an analysis after the specific data has been amassed, the qualitative researcher is required to subject data to an assessment as it is revealed during a study's progress. That is, the qualitative researcher, at the very least, must determine if such information should or should not be further investigated as the study proceeds (Creswell & Poth, 2017).

Mixed Methods

A mixed methods approach makes use of both quantitative and qualitative data. A qualitative research approach does not focus on *quantities* or "how much," but is concerned with *qualities*; it attempts to understand events from the perspective of the participants and provides the detail and depth that is missing from quantitative studies by focusing on the attitudes, feelings, and behaviors of subjects. However, there are problems that are associated with the mixing of research methods within a particular study. First, it can make the conduct of a particular study more complex. Furthermore, mixing methods tends to require more resources in terms of time and personnel (and therefore money) to conduct a study, however, can add to the complexity of conducting research. It often requires more resources, i.e., time and personnel to execute such an approach. Indeed, when it comes to personnel, it is imperative that the principal researcher and/or the team is intimately familiar with the variety of research approaches that comprise both quantitative and qualitative approaches, along with different and appropriate ways in which to select samples and collect and analyze data based on the joint use of the approaches (Creswell & Creswell, 2018).

For this study, a quantitative method was selected. This is because the study seeks to determine (a) how much the LD students who graduated from a high school within the Casa

Grande Union district know about their options and (b) how many of them are and are not selecting the options most appropriate for them. As noted above, a quantitative approach is best utilized when a researcher seeks to determine "how much," "how many," and/or "how often." This study indeed seeks to determine such.

Research Design

A research design represents the procedure whereby the various tasks associated with a particular research study will be systematically conducted (Creswell & Creswell, 2018). As such, it represents the strategy that guides how a study proceeds. The research design also serves to make sure that the study moves in the right direction and accomplishes all the tasks required.

However, it is important that the research design is well-planned. If it is, then it will help make sure that the methods used in the study are appropriate to the researcher's objectives, that the data collected will be of the highest quality possible, and that the correct mode of analysis is employed. In the end, the use of the most appropriate research design will permit the researcher to make conclusions that are valid and, therefore, worthy of being trusted. (The issue of validity is addressed in a subsequent section).

The types of research designs available to the researcher will depend on whether the researcher is using a quantitative or qualitative method. Several designs are used in qualitative research (Creswell & Creswell, 2018). One is historical design. This design makes use of documents, oral recordings, and interviews to examine and describe events that took place in the past with the purpose of better understanding the present and anticipating future events. The phenomenological research design makes use of participant observation, conversations, focus groups, and in-depth interviews using open-ended questions that permit interviewees to respond at length in their own words. The purpose of this design is to describe how individuals experience a particular act or event. Other qualitative designs include the grounded theory design (which uses data obtained through observation, document examination, focus groups, and interviews to construct a new theory), the ethnographic design (which uses participant observation to determine the characteristics of a culture or an ethnographic group) and the case study (which investigates a particular person or group).

There are four types of quantitative research designs: causal comparative, correlational, quasi-experimental, and experimental. A causal comparative is used to identify cause-effect relationships between independent and dependent variables. The is used when a researcher wants to study the cause and effect in retrospect. This could determine the consequences or causes of differences that already exist among or between diverse groups of people.

Correlational research attempts to determine the extent to which a relationship between two or more variables exists. To make such a determination, statistical analysis is employed. Notably, unlike the experimental research design (see below), the correlational design does not require the researcher to subject variables to manipulation. Rather, once identified, variables are subjected to scrutiny within their natural setting. Like experimental designs, the researcher is required to formulate a testable hypothesis.

A quasi-experimental research design is employed to show that a cause-and-effect relationship exists among a set of variables. As the name of this design indicates, the approach is not experimental but *quasi*-experimental; that is, it resembles an experimental design (again, see below) but is not truly experimental. A quasi-experimental design differs from an experimental design in keyways. First, although the use of the design requires the researcher to develop a hypothesis and identify an independent variable, the identified variable is subjected to manipulation (as not the case with the correlational design). Furthermore, the quasi-experimental design does not require the researcher to use random assignment, i.e., the utilization of chance to make sure that each participant has an equal opportunity to be assigned to a particular group. Instead, the researcher conducts a study with groups that already exist. The design's validity, however, is strengthened using control groups, wherein one group (or groups) is exposed to a variable while another is not. The researcher then compares the outcomes of the two groups.

A pre-experimental research design is used by a researcher prior to the initiation of a true experiment and is used to determine whether it is worthwhile to invest the time, effort, and money required to conduct a true experiment. Pre-experimental designs follow the basic steps of an experimental design but fail to include a control group. An experimental research design is used to determine whether a cause-and-effect relationship exists among a group of variables. A key characteristic of this design is that it requires researchers to formulate a hypothesis (which identifies the independent and dependent variables) that can be evaluated via the study. Researchers are also required to impose control over all variables during the study except one, the independent variable, which is manipulated to determine the impact that it has on the dependent variables. Another distinguishing characteristic of this design is that it requires researchers to randomly select and randomly assign participants to the group that will receive the experimental treatment.

The research design that will be used in this study is a causal comparative research design because the independent variable is not manipulated and is categorical. The following sections will show why this is the best design given the purpose of this study.

Population and Sample

Target Population

The target population, i.e., the group from which the sample of participants will be selected, consists of LD high school graduates from 2022, specifically those who have graduated from a high school in the Casa Grande Union High School District. The target population also includes any student who is at least 16 years of age who has an IEP in effect. In total, it is estimated that there were 130 LD seniors in the district in 2022. Note that this population is medium. This impacts the way the sample will be selected.

Sampling Method

Researchers are not able to gather data from every individual in a population. In most cases, the population is just too large. As a result, researchers will select a sample, i.e., a group of people chosen from that population who will participate in the study. However, to ensure that the study measures what the researcher intends to measure, the researcher must select the sample in a way that best *represents* the entire population. Such representation is important because the degree to which the sample represents a population, i.e., reflects or is characteristic of that population, will determine the extent to which the conclusions drawn from the results are valid. Unfortunately, not all samples are created equal; indeed, some will more accurately reflect the characteristics of a population than others, thereby impacting the external validity of a study's results.

What are the factors that impact representativeness? The key factors that impact representativeness are the size of the sample selected relative to the size of the population, and the method whereby that sample was selected. With regards to size, the larger the sample, in general, the more likely the sample will be representative of a given population. However, it should be noted that as the sample size increases and approaches that of the entire population, the increase in accuracy will be minimal. In other words, although the general rule is that the larger the sample, the more likely the sample represents a population, there is a point where the increase in the sample will not significantly increase the sample's representativeness. As such, the researcher will have to decide whether enlarging the sample is worth the time and trouble. On the other hand, if a sample is too small, the likelihood that the sample will be representative is slim. In short, there is a sample size that is optimal given the size of the population, the margin of error that the researcher will tolerate, and the confidence level, or the accuracy of the margin of error, that the researcher selects.

Researchers have several sampling methods to select from. These options fall under two general sampling categories: probability sampling and non-probability sampling. Probability sampling consists of the random selection of participants. Probability sampling methods include simple random sampling, systematic sampling, stratified sampling, and cluster sampling. Simple *random sampling* selects a smaller group (the sample) from a larger group of the total number of participants (i.e., the population). Under random sampling, each member of a population has an equal chance of being selected. Systematic sampling is like simple random sampling; however, under this method, every member of the population is assigned a number consecutively and participants are selected at regular intervals (e.g., one participant is selected per every 10 population members). Stratified sampling consists of dividing the population into subpopulations based on the relevant characteristics (e.g., gender, age range, income bracket, job role) and calculating how many people should be sampled from each subgroup using random or systematic sampling. Finally, cluster sampling divides the population into subgroups, from which some subgroups are randomly selected to comprise a sample.

In a non-probability sample, sample selection is not random and thus is more likely to be biased. As such, strong inferences about the population cannot be drawn and the conclusions that can be drawn from a study using such a sample may be restricted. However, non-probability sampling has the advantage of being less involved and less expensive to implement. Notably, non-probability sampling tends to be more often used in qualitative research than in quantitative research.

The proposed study will utilize a total population sampling method. Total population sampling, as the name suggests, is a method of sampling in which every member of a particular population possesses specific characteristics in the sample. This form of sampling tends to be used when the population size is small and thus, in many cases, cannot be utilized. The advantage of using this mode of sampling is that a deeper understanding of that which is being studied is possible.

Total population sampling is also a form of purposive sampling. Purposive sampling is a form of sampling in which the participants of a study are selected because they possess a particular set of characteristics or fit a particular profile, e.g., LD individuals who have graduated from a high school in a particular district. The process of purposive sampling is simple. It consists of selecting individuals who match a particular profile and rejecting those who do not.

However, the use of a total population sample has a notable drawback: the results of a study using this method cannot be generalized to a broader population that possesses the same characteristics.

Why use total population sampling? Why not engage in random sampling? A key reason that researchers use total population sampling is because, as noted, the population in question is small, which makes it easy to include most if not every member in a study. However, where total population sampling is used, there is a reason the population is small: the characteristics shared by that population are unique or rare.

To participate in the study, students must possess several, rare characteristics. First, students must have a documented LD. Second, have had an IEP, Third, attended and recently graduated from a high school located within the Casa Grande Union High School District.

The sampling number of participants will be less than one hundred. The participants would have had to select one of the three key post-secondary options (college or university), (trade or training program), or (competitive integrated employment). All the selected participants must have received a diploma from Casa Grande Union High School District. For the survey to be valid, the participant must answer all six questions. All other surveys will not be excluded.

Instrumentation and Data Collection

There is a significant difference between the kind of survey instruments used in quantitative studies and qualitative studies. For qualitative studies, the researchers have two instrument options. The first is the semi-structured interview. This format restricts the researcher to a fixed set of questions; however, probing questions are allowed. The second is the unstructured interview, which makes use of open-ended questions. Unstructured, however, is a relative term. Although the unstructured interview does not follow a strict format and the questions are not strictly formulated, it is not without any form; the research questions serve to provide a certain amount of structure to the interview. Nevertheless, it is far less structured than the semi-structured or structured interview (see below). Being considerably less structured than its counterparts, the unstructured interview allows researchers to go further in their exploration of an answer and respond with questions that could not have been anticipated in the formulation of a more structured instrument.

Unlike qualitative studies, quantitative studies make use of structured interview instruments. Such instruments contain questions that are fixed, close-ended, and tightly formatted. As such, this instrument does not permit the researcher to ask probing questions. Accordingly, the effectiveness of the structured interview instrument is contingent upon how well the questions are prepared (Creswell & Poth, 2017).

There are three common types of quantitative survey questions, descriptive survey questions, comparative survey questions, and relationship-based survey questions. Descriptive survey questions, as the term suggests, are used to obtain descriptions of the variables. Descriptive research questions thus seek to determine “how much,” “how often,” “how likely,” etc. Comparative survey questions, however, are used to clearly distinguish each variable from the others. These questions often ask what the difference is between variables that belong to various categories. Relationship-based survey questions are used when the study requires the researcher to determine the relationship and association between at least two variables.

The instrument that will be used in this study is the 10-point Likert scale type survey. This survey is a structured interview instrument consisting of eight closed-ended questions. This will allow the researcher to collect the respondents’ opinions with varying degrees. It can also give quantitative data for comparative analysis. This survey will be given to students with disabilities with educational services that are provided according to students’ annual IEP who have left high school the previous year and plan to attend one of the three key post-secondary options.

Data Analysis Procedures

In quantitative studies, two types of statistics are used to analyze resultant data, namely, descriptive statistics and inferential statistics. Descriptive statistics, as the term suggests, provide a description of the sample. Inferential statistics, on the other hand, attempt to provide a forecast about the sample based on the findings (Creswell & Creswell, 2018).

There are four common forms of descriptive statistics used. The first three forms are referred to as measures of central tendency. They include the mean (i.e., the average), the median (the value between the first and second halves of data), and the mode (the value that occurs most frequently). The fourth is the standard of deviation (SD). This measure indicates the extent to which the numbers are dispersed or how close they are to the mean. When close to the mean, the SD will be high, when they are diffuse, the SD will be high (Creswell & Creswell, 2018).

The other type of statistic used to analyze data is inferential statistics. Inferential statistics uses the data from a sample and makes inferences about the larger population. The goal of inferential statistics is to draw conclusions from a sample to the population and must be confident that the sample accurately reflects the population. This requirement will affect the process. At a broad level, the following must occur. Define the population that is being studied, draw a representative sample of the population, and use analyses that incorporate the sampling error. Picking a group is not an option so a random sampling will allow the researcher to have confidence that the sample represents the population. The primary method for obtaining samples that mirrors the population on average. Random sampling will produce statistics, such as mean, that do not tend to be too high or too low. By using random samples, the researcher can generalize from the sample to the broader population. Unfortunately, being able to gather a true random sample can be a complicated process (Creswell & Creswell, 2018).

The Issue of Validity: Quantitative vs. Qualitative Studies

The criteria whereby the validity of a study is judged differ depending on whether the study is quantitative or qualitative, and it is unfair to use the criteria of one to judge the other. Indeed, quantitative, and qualitative researchers define validity in a manner that differs from each other. Validity, from the perspective of the quantitative researcher, refers to the extent to which the tools used in a particular study, and thus the study itself, measure the phenomenon that the researcher sought to measure. In quantitative research, there are two types of validity – internal and external. The external validity of a study refers to the extent to which the findings of the study are generalizable to other populations; that is, it refers to the extent to which the findings can be applied to other persons with the same characteristics in various places and at different times.

Notably, the higher the degree of external validity a study has, the stronger conclusion a researcher can make about the results. Thus, to make sure that a study's external validity is the greatest possible, quantitative researchers will engage in random sampling. Random selection refers to the way a sample is drawn from a given population, namely, the drawing of a sample in a way such that when each item in the sample is selected, every item in the population has an equal chance of being selected (Creswell & Creswell, 2018).

Internal validity, in a quantitative research study, is determined by the extent to which the results of a research study or experiment are related to the variables that were either measured, controlled, or manipulated. This means that the relationship between the variables that are being observed has not been confounded, i.e., distorted, or contaminated, by other variables, variables that often are not being measured (Creswell & Creswell, 2018).

There are many threats to internal validity that should be considered. I will mention ten and identify the ones that will relate to the research. The first is attrition which is considered bad for research because it leads to bias. The second confounding variable is when your research has an extra variable related to the treatment applied to the sample group that affects the results. The third is diffusion which can be tricky and spreads to one group administered treatment to the control group. The fourth researcher's bias is when the researcher behaves differently to one group. The fifth is the historical events which are a past event that could directly or indirectly influence results. The sixth is instrumentation that can guide participants acting in a type of way through the research method. Seventh is maturation and time should be considered an important variable. Eighth is statistical regression that is a threat to internal validity as participants at extreme ends of treatment can naturally fall into a direction because time has passed and not because the treatment administered. The ninth is repeated testing. Assessing the research with repeated measures. Our tenth and final one is the selection of subjects. This can cause a bias that results from the selection of study groups (Creswell & Creswell, 2018).

Attrition could influence this study if participants decide to leave the research study, then the findings will rely on participants who otherwise drop. Another internal validity that could affect this research is researcher's bias. This happens when the researcher behaves differently to one group.

The validity of a qualitative study, on the other hand, is determined based on the degree to which the tools that are used, the processes that were engaged in, and whether the data gathered was fitting or appropriate. Thus, validity is determined based on whether the research design is considered suitable for addressing the research questions.

The other types of validity consist of content, construct, face, and criterion. Considering the validity and the reliability of your research methods and measurements, matters while conducting quantitative research. Validity is used for examining how accurately something gets measured by a method. If a particular method measure all that it claims and the generated results closely align with real-world values, the method is valid (Creswell & Creswell, 2018).

Construct validity is a way of ensuring that the measurement method aligns within the construct that is the aim to be measured. To attain construct validity, it is important to make sure that the indicators used are cautiously developed based on existing knowledge. The questionnaire needs to include only relevant questions that can effectively gauge the popularity (Creswell & Creswell, 2018).

Criterion validity can be defined as an external measurement of a similar thing. It is a widely popular and established test that is considered valid already. To assess criterion validity, calculate the correlation that exists between measurement's results and the criterion measurement's results. If the correlation is high this will indicate the test is measuring what it is supposed to measure (Creswell & Creswell, 2018).

How is reliability and validity realized in qualitative research? Reliability in qualitative research refers to the stability of responses to multiple coders of data sets. It can be enhanced by detailed field notes by using recording devices and by transcribing digital files. However, validity in qualitative research might have different terms than in quantitative research. Lincoln and Guba (1985) used "trustworthiness" of a study as the naturalist's equivalent for internal validation, external validation, reliability, and objectivity. Trustworthiness is achieved by credibility, authenticity, transferability, dependability, and confirmability in qualitative research.

To operationalize these terms, long engagement in the field and the triangulation of data sources, methods, and investigators to establish credibility. To confirm that the results are transferable between the researcher and those being studied, a thick description is needed. In qualitative research, researchers look for dependability that the results will be subject to change and instability rather than looking for reliability. In qualitative research (Creswell & Poth, 2017).

Summary

Three fundamental research questions guide the research process of this study. The first is to examine the relationships between participants' gender and survey results with the three key post-secondary options within the Casa Grande Union High School District in Casa Grande, Arizona. The second is whether relationships exist between participants' ethnicity and survey results. Lastly, determine if a relationship exists between participants' and the disability category within the three key post-secondary options. These are the questions this study seeks to answer.

CHAPTER FOUR: FINDINGS

The aim of this quantitative causal comparative study was to determine the degree to which students with LDs who attended school in the Casa Grande Union High School District were aware of the three key post-secondary options that might be tailored to their specific need. According to research, students with LDs often find it difficult to transition from high school to post-secondary life, and as a result, they are more likely to need some kind of help transferring from high school to post-secondary life (Horowitz et al., 2017). Being well-informed will help guarantee that they have the chance to make full use of the advantages of post-secondary education without confusion or delay.

The three research questions (RQ) that the study intended to address were:

RQ 1: Was there a difference between participant gender and survey results?

RQ 2: Was there a difference between participant ethnicity and survey results?

RQ 3: Was there a difference between participant disability category and survey results?

This chapter's goal is to discuss the study's findings, which will broke down sections organized by RQ and include a description of the sample population's demographic characteristics, descriptive statistics for the major variables, and the results of the statistical analysis.

Sample Population

The sample population utilized in this study consisted of high school graduates with LDs from the year 2022 and included those who had graduated from a high school in the Casa Grande Union High School District. The study utilized a total population sampling method in which every LD student was included in the sample.

Although the survey was open to all eligible students, not all 130 students who were expected to participate chose to participate. Although there were ninety-five graduates overall (fewer than the predicted 130), only 68 qualified participants (71.6%) took part in the survey. In other words, 28.4% of potential respondents either declined or were unable to do the survey.

Table 2

Demographic Characteristics of Participants

	Frequency	Percent
Gender		
Male	39	57.4
Female	27	39.7
Other	2	2.9
Ethnicity		
Hispanic	34	50.0
Black	8	11.8
White	14	20.6
Multi & Other	3	4.4
American Indians	9	13.2
Documented Disability		
SLD	21	31.3
ED	5	7.5
Autism	10	14.9
OHI	11	16.4
MD	3	4.5
Mild	8	11.9
Other	8	11.9
Speech	2	1.5

The students participating in the survey (57%) were of male gender (Table 3). Around 40% of the population were of female gender. White and Black students made up 21% and 12% of the sample's overall population, respectively, while 50% of the pupils were Hispanic. Thirty-one percent of the students had a SLD, which made up most of the group. Following those with autism, who made up 15%, were those with other health impairments, who made up 16%.

Descriptive Statistics

Descriptive statistics of the main outcome (dependent) variable is summarized and broken down according to the sub-constructs in Table 4. The table separates the descriptive into measures of central tendency (mean and median) and measures of variability (standard deviation, minimum, maximum, kurtosis, and skewness). Most of the variables' large standard deviations show that the data are dispersed and widely distributed from the mean. Since the means and medians are also widely apart, the values are not normally distributed.

Table 3

Descriptive Statistics of the Dependent Variable

	Will you be attending a college or university?	Will you be attending a trade or vocational training program?	Will you be entering the workforce?	Total Sentiment
N	68	68	68	68
Minimum	1	1	1	3
Maximum	10	10	10	24
Mean	4.63	3.40	4.63	12.66
Std. Deviation	3.824	3.373	4.178	4.524
Median	3.00	1.0	1.50	12.00
Kurtosis	–1.671	–0.393	–1.811	1.081
Skewness	0.385	1.107	0.393	0.552

Findings for Research Questions and Related Hypotheses

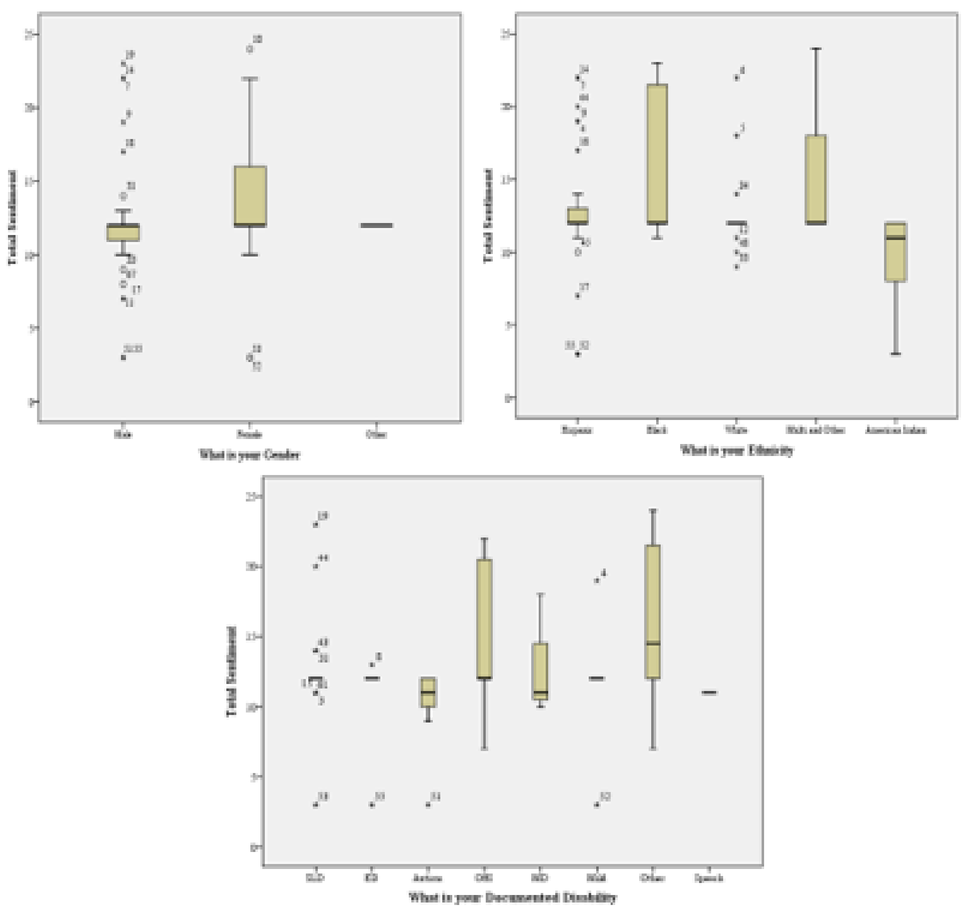
The purpose of this study was to examine if there was a difference between survey results and the students' demographics (gender, ethnicity, and disability category) within the three key post-secondary options in the Casa Grande Union High School District in Casa Grande, Arizona. Three RQs constructed, and the one-way analysis of variance (ANOVA) utilized to determine whether there are any statistically significant differences between the means of the independent variables on survey results. The results of the statistical analysis for each of the RQs are presented in this section.

Assumption Analysis

There are always conditions that the data must satisfy for the study to apply the one-way ANOVA test. To judge the quality of the outcomes, it is frequently a useful practice to gauge how much these assumptions have deviated from reality. The following main assumptions (Field, 2013) must be met: (a) there should be no significant outliers, (b) the dependent variable should be normally distributed for each group of the independent variable, and (c) there needs to be homogeneity of variances.

Figure 1

Box Plots Showing Distribution of Values and Outliers



The assumption regarding outliers was evaluated using box plots as visual aids (Figure 1). As illustrated above, when the dependent values were disaggregated against the independent variables (gender, ethnicity, and disability category), there were several data points with outlier values.

For the assumption of normality, the Shapiro-Wilk test was utilized (Table 4). The null hypothesis for the Shapiro-Wilk test is that a variable is normally distributed in some population. The Shapiro-Wilk test showed that the distribution of most of the variables departed significantly from normality (p-value < 0.05).

Table 4

Shapiro-Wilk Test of Normality of Total Sentiment

	Statistic	**df**	***p*-value**
Gender			
Male	0.820	38	0.000
Female	0.861	27	0.002
Ethnicity			
Hispanic	0.840	34	0.000
Black	0.728	8	0.005
White	0.749	13	0.002
Multi and Other	0.750	3	0.000
American Indian	0.821	9	0.036
Documented disability			
SLD	0.682	21	0.000
ED	0.638	5	0.002
Autism	0.689	10	0.001
OHI	0.866	11	0.069
MD	0.842	3	0.220
Mild	0.724	8	0.004
Other	0.724	8	0.425

The assumption for homogeneity of variances was assessed using Levene's test for homogeneity. The test was only possible for gender (Table 4) since the other two independent variables (ethnicity and disability category) had constant values of total sentiment (dependent variable). In addition, most of the categories had equal median, making the test impossible to work (IBM, 2020). The null hypothesis for Levene's test is that the groups we're comparing all have equal population variances. If the resulting p-value of Levene's test is less than 0.05, the obtained differences in sample variances are unlikely to have occurred based on random sampling. Thus, the null hypothesis of equal variances is rejected, and it is concluded that there is a difference between the variances in the population. Based on gender, the variances are equal (Table 5) and so the assumption of there being homogeneity of variances passed. However, the other independent variables, the assumption could not be successfully tested since most of the categories had constant values.

Table 5

Levene's Test of Homogeneity of Variance for Gender on Total Sentiment

	Levene Statistic	df1	df2	*p*-value
Based on Mean	2.851	1	63	0.096
Based on Median	1.008	1	63	0.319

The researcher concluded that using the parametric statistics of the one-way ANOVA would not produce reliable results based on the assumption analyses. The Kruskal-Wallis test was chosen by the researcher as the non-parametric rank-based test alternative to ANOVA.

Research Question 1

Research Question 1 was constructed as follows: Was there a difference between participant gender and survey results? The Kruskal-Wallis test was used to determine if there were statistically significant differences between the different gender groups in the survey results. A Kruskal-Wallis H test showed that there was no statistically significant difference in total sentiments score between the different gender groups, $\chi^2(2) = 2.238$, $p = 0.237$, with a mean rank total sentiments score of 31.62 for males, 38.56 for females and 36.00 for Others. The null hypothesis was therefore accepted as stated that there is no difference between participant gender and survey results.

Table 6

The Kruskal-Wallis Testing the Differences in Total Sentiments and Gender

	N	**Mean Rank**	**Chi-Square**	**df**	***p*-value**
Gender					
Male	39	31.62			
Female	27	38.56	2.238	2	0.327
Other	2	36.00			

Research Question 2

Is there a difference between participant ethnicity and survey results? A Kruskal-Wallis H test was conducted to assess whether there was a statistically significant difference in total sentiment scores among the various groups of ethnicities. The independent variable was ethnicity, with five levels and the dependent variable was the total sentiments scores. The total sentiment scores of five groups were compared. On average, Multi and Other (Mean Rank = 46.67) had the highest scores followed by Black people (Mean Rank = 44.13). The Hispanic ethnicity had a mean rank of 35.60, White 34.18, and American Indian with 18.22. There was a statistically significant difference between the total sentiments scores among the various ethnicities $\chi^2(4) = 10.457$, $p = 0.033$. Post-hoc comparisons were conducted, and a Bonferroni-adjusted test indicated that the difference between Blacks and American Indians was statistically significant ($Z = 2.868$, $p = 0.041$), and all other combinations were non-significant.

Table 7

The Kruskal-Wallis Testing the Differences in Total Sentiments and Ethnicity

	N	**Mean Rank**	**Chi-Square**	**df**	***p*-value**
Ethnicity					
Hispanic	34	35.60			
Black	8	44.13			
White	14	34.18	10.457	4	0.033
Multi and Other	3	46.67			
American Indian	9	18.22			

Research Question 3

The last question was framed as: Was there a difference between participant Disability Category and survey results? There was a non-significant difference between the total sentiment scores by different documented disabilities, $\chi^2(7) = 12.032$, $p = 0.099$, with different mean ranks (Table 8). The results led the researcher to accept the null hypothesis of no difference between participant Disability Category and survey results.

Table 8

The Kruskal-Wallis Testing the Differences in Total Sentiments and Documented Disability

	N	**Mean Rank**	**Chi-Square**	**df**	***p*-value**
Documented Disability					
SLD	21	35.07			
ED	5	31.90			
Autism	10	20.05			
OHI	11	41.41	12.032	7	0.099
MD	3	27.33			
Mild	8	33.88			
Other	8	44.75			
Speech	2	15.00			

Summary

The results of this study may provide information to the LD student and being well-informed will help guarantee that they have the chance to take full use of the advantages of post-secondary education without confusion or delay. With the choices that students made and who made them and thus suggest what future interventions may be required to help future graduating seniors in Casa Grande Union High School District. The chapter has presented the findings of the study that included the description of the demographic characteristics of the sample population, the statistical assumptions analysis, and statistical analysis findings, organized by RQ. The results from the various inferential analysis conducted showed that there were statistically significant differences among Black and American Indians for total sentiment scores among students in the Casa Grande Union High School District.

The following Chapter Five will present, discuss, and critique the findings from the study analysis. The discussion will include an interpretation of the findings, limitations of the study, and describe the potential implications and recommendations.

CHAPTER FIVE: DISCUSSION

This quantitative causal-comparative study aimed to determine the degree to which students with a LD who attended school in the Casa Grande Union High School District were aware of the three key post-secondary options that might be tailored to their specific needs. The researcher conducted a homogeneity test called Levene's test. Nevertheless, this analysis was only possible for gender since the remaining categories (ethnicity and disability group) yielded consistent results. Due to this, it was impossible to evaluate the degree to which the groups varied from one another. Levene's test assumes as its null hypothesis that the groups being compared all share the same degree of sentiment variance.

If the test's *p*-value is less than 0.05, then the observed variations in variance between the groups are statistically significant (Andrade, 2019). Because of this, the researcher can conclude that there are differences in the population variance and reject the null hypothesis. According to Table 8, the study indicated that the differences in emotional expression across the genders were similar. The assumption of homogeneity of variances could not be evaluated, nevertheless, because the other variables all had constant values. Thus, confirming or rejecting the assumption for those variables was impossible. Parametric statistics such as one-way ANOVA was shown to be unreliable, as was the study's overall conclusion. The researcher, thus, opted for the Kruskal-Wallis test, a non-parametric rank-based option to ANOVA.

The results of Levene's test and the following Kruskal-Wallis test have major significance for the rest of the research. First, there are differences in expression of emotion that are specific to groupings within the study population, like those described by ethnicity or disability category, because the test for variance homogeneity throughout all groups except gender indicated the likelihood of differences in emotional expression. This emphasizes the importance of conducting additional research to investigate these distinctions.

Second, adopting the Kruskal-Wallis tests rather than a one-way ANOVA suggests that parametric statistics can occasionally not be valid for assessing data that does not meet the prerequisites for normality and homogeneity of variance. By comparing medians across categories with the Kruskal-Wallis test, researchers may avoid making these assumptions and conduct a more reliable statistical analysis (Barnett et al., 2022).

Interpretation of Findings

Research Question 1, which compared survey responses based on respondents' gender, found no statistically significant difference in overall sentiment scores by demographic subgroup. These findings align with other research in this area, which has identified no statistically significant differences between male and female participant sentiment analysis scores.

For example, Zahidi et al. (2021) looked at sentiment analysis on Arabic social networking sites and did not observe any significant differences in sentiment scores with respect to gender. Likewise, Pelttari (2022)'s investigation of gender differences in YouTube language usage revealed that, while there were some slight differences in language use between males and females, such differences did not alter sentiment analysis scores.

Since there was no statistically significant difference in participants' sentiment scores with respect to their gender, the findings of Research Question 1 validate and add to the current understanding of the subject. These findings have major ramifications regarding the application of sentiment analysis in a variety of fields, as they imply that gender might not constitute a major determinant of sentiment scores, liberating investigators from concentrating on other variables that could have a greater influence on sentiment analysis results.

In Research Question 2, the findings on the correlation between survey respondents' ethnicity and their responses contribute to the state of knowledge in the field by illuminating the fact that there are substantial variances in respondents' overall sentiment scores. This confirms several other studies that a person's ethnic background strongly influences how they think about and talk about a wide range of issues. While some prior research has demonstrated significant disparities in sentiment scores between ethnic groups (Bono et al., 2020), the current study finds that this is exclusively between Blacks and American Indians. The study's results shed light on the complex link between ethnicity and attitudes, suggesting that the differences may not be substantial across all groups. In Research Question 3, previous research indicated no significant changes in sentiment scores depending on disability status. This study's finding that there was not a large variation between participant disability groups and survey results supports those findings. This fits the notion that people's perspectives on different issues might be unaffected by disability status.

Analysis of results to research question 1 revealed no statistically significant differences in the mean scores for sentiments among respondents of various genders. Mean rank total sentiment scores were 31.62 for males, 38.56 for females, and 36.00 for the rest, as determined by the Kruskal-Wallis H test. The *p*-value of 0.237, greater than the usually accepted 0.05 threshold, indicated that the test did not yield a significant result. This indicates that the null hypothesis that there is no disparity between respondents' genders and their responses, was accepted. These results are consistent with earlier studies that have discovered no substantial variations in gender when it comes to attitudes and perceptions toward certain topics (Tamas et al., 2019).

Regarding the second study question, the goal was to compare the survey results to documented disability and ethnicity to see if there was any correlation between the two. Total sentiment scores were utilized as the response variables in a Kruskal-Wallis H test, with ethnicity as the predictor variable. Multi-racial and Other had the largest mean rank score of 46.67, trailed by Blacks with an average rank score of 44.13, demonstrating a statistically significant variance in total sentiment scores among ethnic communities. The average rank scores for Hispanics, Whites and American Indians were 35.60, 34.18, and 18.22. Post hoc analyses showed a statistically significant variation between Blacks and American Indians, with no other significant differences. However, according to Gage et al. (2019), the literature on Black disabled students is scarce, and there is no publicly accessible research reporting an analysis of Black students with and without special needs nationally.

Despite these differences in mean rank scores in research question 3, the researcher found no statistically significant differences in overall sentiment scores between categories of the documented disability. According to the data, the researcher was justified in rejecting the alternative hypothesis that there would be a correlation between the respondents' disability status and survey responses.

Limitations

Despite its merits, this research has some limitations that should be considered. However, it provides important insights into the extent to which high school graduates with learning disability (LD) in the Casa Grande Union High School District are conscious of the opportunities available to them after high school. The study may not be generalized to the population due to its tiny sample size (only sixty-eight participants). This may not be representative of graduates from future years, as the sample was restricted to the class of 2022. There is a likelihood that the study's results cannot be extrapolated to high schools located outside the Casa Grande Union High School District or to students who struggle with a LD in various parts of the world. Respondents may have been biased on the side of what they deemed to be the "appropriate" or "socially acceptable" answer instead of the "truthful" one. Participants may not have provided correct information regarding their demographics or post-secondary expectations, and the study's dependence on self-reported data may have contributed to errors or inconsistencies. In a sample of young adults, Brown et al. (2021) compared self-reported diagnoses of a LD with objective assessments of cognitive capacity and academic accomplishment. The study revealed that several people who reported having a LD did not match the diagnostic criteria. Finally, the current study only looked at one facet of the individualized post-secondary education opportunities for students with a LD. According to Harrison et al. (2022), the decision to enroll in post-secondary education may also be influenced by various other circumstances, including the student's financial situation, the accessibility of necessary accommodations and support services, and the availability of relevant academic programs.

Recommendations for Future Research

Several avenues for future study emerge from the study's results. First, increasing the size and diversity of the study's sample population would help future research be more representative of the population at large. Second, suppose researchers want to learn more about how students with a LD decide their futures. In that case, qualitative approaches like interviews or focus groups might be an appropriate starting point. Moreover, future research might analyze how students with LD' socioeconomic status affects their choices on what to do after high school

(Greenway & Eaton Thomas, 2020). Also, the research might be conducted in other academic districts to assess outcomes in various settings. Lastly, future research might examine the efficacy of programs geared toward enhancing the success of students with a LD in higher education. Career guidance, mentorship initiatives, and additional support in the classroom are all examples of workable solutions. Osher et al. (2020) investigated the challenges faced by students with LD between high school and college, concluding that thorough transition planning and support were essential. Since students with a LD may have had more trouble gaining access to support services and transitioning to online learning, studies examining the effects of COVID-19 on higher education may also be pertinent (Neece et al., 2020). Harun et al. (2020) advocate further upgrading the present school-to-work transition intervention at secondary and post-secondary institutions to equip students with a LD with marketable skills. By filling in these knowledge gaps, researchers may comprehend the challenges that students with a LD encounter while attempting to further their education after high school and create ways to help smooth their transition into higher education and the workforce.

Recommendations for Policy and Practice

Even for students without LD, making the leap from high school to college may be stressful, but it can be more difficult for those with LD. With the proper people by their side and the tools at their disposal, this period of change can be one of enormous opportunity and positive development.

Individually, high school graduates with a LD could experience challenges getting into college, finding affordable housing and transportation, and communicating their needs and rights to the public. Increasing post-secondary awareness throughout the year could help increase options that are available for after graduation. Oliver et al. (2020) evaluated students with learning difficulties enrolled in a post-secondary transition program, and they found that these students had trouble with the application process and were not aware of the support services that were offered. Students with a LD must have access to the support they need to realize their full potential and participate fully in society.

Parents and caregivers of students with a LD tie could experience trouble transitioning to the change from high school to post-secondary education. Parents may have a sense of helplessness and perplexity due to their child's intricate needs while going through such a huge life change. An analysis of the variables influencing the post-secondary expectations of high school students with learning difficulties by Park et al. (2020) brought attention to the importance of family support and self-efficacy in professional decision-making. By providing them with information, resources, and support, families can help parents and caregivers understand their child's needs and develop the abilities needed to provide effective support and advocacy.

Post-secondary institutions must act quickly to implement changes that will improve program awareness to students with a LD. To accomplish this, partnering with local high schools about available programs and training available. By making these changes could increase enrollment with LD students. Those from all backgrounds and skill levels might be included which could eventually benefit both school and student.

The attitudes and behaviors of society and governments should change if LD persons are to have the same rights and benefits as their non-LD counterparts. This action might involve advocating for changes to existing laws. These regulations broaden protections for those with a LD, increase funding for relevant services, and increase public knowledge and education. By granting them equitable access to the opportunities and resources available, the policies may, with everyone's joint efforts, improve communities and the performance of persons with LDs.

Increasing resources available to students with LD by allowing parents to participate in the enrollment process although students are considered adults. This could increase the knowledge of students and caregivers of available resources offered for post-secondary options.

Implications

This study has a wide range of theoretical, empirical, and methodological implications. To examine the relationship between a predictor variable (learning LD) and a single response variable, this study adopted a causal-comparative strategy (awareness of post-secondary education alternatives). It compares the levels of awareness of students with and without a LD to see if there are any differences in their understanding of post-secondary education. The significance of discrepancies can be determined using statistical approaches if the researcher employs quantitative methodologies (Sürücü & Maslakçi, 2020).

This study is based on a concept of disability that claims that persons with a LD encounter challenges. These challenges are not just from the standpoint of their health but also from the standpoint of society at large (Norwich, 2019). This study examines how well-informed these students are about post-secondary education options that are suitable for their needs. This underscores the need for more social support and inclusivity for people with learning difficulties.

By presenting empirical data about how people with learning challenges experience college, this study fills a gap in the literature. The detailed examination of one school district's students with a LD can aid in directing the creation of programs and supports for this demographic that are more successful. This study adds to the expanding body of literature that supports disability models and the advantages of inclusive educational strategies in the classroom.

Students with a LD in the Casa Grande Union High School District were less likely to be aware of options for higher education than students without a LD, according to this quantitative causal-comparative study. First, LD support organizations and schools should scale up their efforts to inform students and their families about post-secondary education options that are specifically tailored to their needs. Students with intellectual LD have post-secondary education as a feasible educational and employment pathway, according to Alqazlan et al. (2019). Examples include conducting educational sessions, distributing pertinent materials, and providing one-on-one assistance and counseling.

Second, greater resources for post-secondary education options should be made available to students who have a LD. Through collaborations with regional organizations and higher education institutions, teachers and counselors might gain training and support, particular programs and services could be developed, and a network of resources could be established.

Thirdly, schools should make a concerted effort to create an atmosphere that encourages and welcomes kids from diverse backgrounds and academic levels. For students with a LD in high-risk environments, Quinn et al. (2020) emphasized the importance of personalized education. Creating a setting where students with and without a LD feel encouraged and accepted, as well as increasing public awareness and understanding of LDs, are two ways to achieve this.

Conclusion

The most significant finding from this study is that students in the Casa Grande Union High School District might not be aware of the post-secondary education options that are created with their needs in mind. Due to a general lack of understanding of the topic, disabled students may find it difficult to gain the resources and assistance required for post-secondary success. Schools can better prepare students with a LD to reach their full potential if they encourage inclusive practices. They can also offer chances for students who identify as having a LD to engage with and learn from one another and raise understanding of the needs of students with a LD. These results emphasize the importance of institutions that accept and support students with a variety of LDs.

“Know your limits, but never stop trying to break them.”

-Kyle Maynard

“It doesn’t matter which path you take as long as you’re on a path”

-Sonya Hendricks

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APPENDIX A: POWER ANALYSIS

Research Question 1

***t*-tests -** Correlation: Point biserial model

Analysis: A priori: Compute required sample size or, power, and effect size

Input:	Tail(s)	=	One
	Effect size |p|	=	.10
	α err prob	=	.05
	Power (1-β err prob)	=	.80
Output:	Noncentrality parameter δ	=	2.4903856
	Critical t	=	1.6473472
	Df	=	612
	Total sample size	=	614
	Actual power	=	0.8003237

Research Question 1

***t*-tests -** Correlation: Point biserial model

Analysis: A priori: Compute required sample size or, power, and effect size

Input:	Tail(s)	=	One
	Effect size |p|	=	.30
	α err prob	=	.05
	Power (1-β err prob)	=	.80
Output:	Noncentrality parameter δ	=	2.5158836
	Critical t	=	1.6698042

	Df	= 62
	Total sample size	= 64
	Actual power	= 0.8005036

Research Question 1

***t*-tests -** Correlation: Point biserial model

Analysis: A priori: Compute required sample size or, power, and effect size

Input:	Tail(s)	= One
	Effect size |r|	= .50
	α err prob	= .05
	Power (1-β err prob)	= .80
Output:	Noncentrality parameter δ	= 2.6457513
	Critical t	= 1.7291328
	Df	= 19
	Total sample size	= 21
	Actual power	= 0.8172279

APPENDIX B: INSTITUTIONAL REVIEW BOARD LETTER

NAU NORTHERN ARIZONA UNIVERSITY
Office of Research Compliance

Institutional Review Board for the
Human Research Protection Program

525 S Beaver St
PO Box: 4062
Flagstaff AZ 86011
928-523-9551
https://www.nau.edu/IRB

To:	Sonya Hendricks, ED.D
From:	NAU IRB Office
Approval Date:	January 25, 2023
Project:	THREE KEY POST-SECONDARY OPTIONS FOR LEARNING DISABILITY STUDENTS AT CASA GRANDE UNION HIGH SCHOOL DISTRICT
Project Number:	1983052-3
Submission:	New Project
Action:	APPROVED
Project Risk Level:	MINIMAL RISK
Approval Expiration Date:	January 9, 2028
Next Report Date:	
Review Category/ies:	**The project is not federally funded or supported and has been deemed to be no more than minimal risk.**

This project has been reviewed and approved by an IRB Chair or designee.

- Northern Arizona University maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #00000357).
- All research procedures should be conducted in full accordance with all applicable sections of the guidance.
- The Principal Investigator should notify the IRB immediately of any proposed changes that affect the protocol and report any unanticipated problems involving risks to participants or others. Please refer to Guidance Investigators Responsibility after IRB Approval, Reporting Local Information and Minimal Risk or Exempt Research.
- All documents referenced in this submission have been reviewed and approved. Documents are filed with the HRPP Office within IRBNet. If subjects will be consented, the approved consent(s) are available within IRBNet upon approval notification from the HRPP Office.

Important

The principal investigator for this study is responsible for obtaining all necessary approvals before commencing research. Please be sure that you have satisfied applicable external and University requirements, for example (but not limited to) data repositories, listserv permission, records request, data use agreement, conducting University surveys, data security, international, conflicts of interest, biological safety, radiation safety, HIPAA, FERPA, FDA, sponsor approval, clinicaltrials.gov, tribal consultation, or school approval. IRB approval does not convey approval to commence research in the event that other requirements have not been satisfied.

APPENDIX C:

Research Question	Variables and Level of Measurement	Statistics
RQ 1 Is there a difference between participant Gender and survey results?	IV: Gender (Categorical) DV: Survey Results (Continuous/Quantitative)	Descriptives (Mean, Median, SD) Inferential (One sample t-test)
RQ 2 Is there a difference between participant Ethnicity and survey results?	IV: Ethnicity (Categorical, 3 or more) DV: Survey Results (Continuous/Quantitative)	Descriptives (Mean, Median, SD) Inferential (One-way ANOVA, Tukey, Effect size)
RQ 3 Is there a difference between participant Disability Category and survey results?	IV: Disability Category (Categorical) DV: Survey Results (Continuous/Quantitative)	Descriptives (Mean, Median, SD) Inferential (ANOVA, Tukey, Effect sizes)

Three key post-secondary options survey

The purpose of this survey is to collect your feedback on the three key post-secondary options for research. These invaluable insights will significantly help to continue to support the Exceptional Student Services at Casa Grande Union High School. The knowledge gained from this study will help determine how the school district can decrease the gap when assisting students with post-secondary options. This could improve the chances of students being self-sufficient and ultimately, live successful lives. The results could point the way for more research that could be conducted to address the research gap.

All responses are highly confidential and used internally. All information will be coded as to not be able to identify the person. Data will be saved for 5 years on a protected hard drive, password protected and encrypted.

Please allow at least 5 minutes to complete thie survey.

Section 1 ...

Informed Consent

I have read (or someone has read to me) this SURVEY form. I'm aware that I am being asked to participate in a research study. I have had the opportunity to ask questions and all answers are to my satisfaction. I affirm that I am at least 18 years of age and voluntarily agree to participate in this study.

1. Do you AGREE TO PARTICIPATE?

- ◯ Yes, Continue to answer the following questions
- ◯ No, I wish not to continue

Section 2 ...

Demographics

Your information is highly confidential, the following information is for internal research purpose only, all information will not be shared externally.

2. What is your gender?

- ◯ Male
- ◯ Female
- ◯ Non-binary
- ◯ Prefer not to say

3. What is your ethnicity?

- ◯ American Indian or Alaskan Native
- ◯ Asian
- ◯ Black or African American
- ◯ Hispanic or Latino
- ◯ Multi-racial
- ◯ White
- ◯ Other

4. What is your documented disability?

- ◯ Autism
- ◯ Emotional Disability
- ◯ Mild Intellectual Disability
- ◯ Multiple Disabilities
- ◯ Other Health Impairment
- ◯ Specific Learning Disability
- ◯ Speech/Language Impairment

Section 3 ...

Post-secondary options

5. Will you be attending a College or University?
1 is *least* of how you feel and 10 is *most of how you* feel.

1	2	3	4	5	6	7	8	9	10

6. Will you be attending a Trade or Vocational Training Program?
1 is *least* of how you feel and 10 is *most of how you* feel.

1	2	3	4	5	6	7	8	9	10

7. Will you be entering the Workforce?
1 is *least* of how you feel and 10 is *most of how you* feel.

1	2	3	4	5	6	7	8	9	10

NAU NORTHERN ARIZONA UNIVERSITY

Office of Research Compliance

Online Survey Consent

You are being invited to participate in a research study titled THREE KEY POST-SECONDARY OPTIONS FOR LEARNING DISABILITY STUDENTS AT CASA GRANDE UNION HIGH SCHOOL DISTRICT. The study is being done by Sonya Hendricks from Northern Arizona University.

PURPOSE: The purpose of this research study is to collect individual responses on a survey form student who graduated from a high school in the Casa Grande Union High School District that had an individual education plan and a documented disability. The survey will help determine how the district can improve assisting students with post-secondary options.
If you agree to take part in this study, you will be asked to complete an online survey/questionnaire. This survey/questionnaire will ask about your gender, ethnicity, documented disability and the three key post-secondary options that include the following 1. College or University, 2. Trade or Vocational Training, or 3. Entering the Workforce and it will take you approximately 5 minutes to complete.

BENEFIT: You may not directly benefit from this research; however, we hope that your participation in the study may *help you with future online survey*. We believe there are no known risks associated with this research study; however, as with any online related activity the risk of a breach of confidentiality is always possible. To the best of our ability your answers in this study will remain confidential. We will minimize any risks by all data will be coded as to not be able to identify the person. Data will be saved for 5 years on a protected hard drive, password protected and encrypted.

VOLUNTARY: Your participation in this study is completely voluntary and you can withdraw at any time. You are free to skip any question that you choose. If you choose not to participate it will not affect your relationship with Northern Arizona University or result in any other penalty or loss of benefits to which you are otherwise entitled.

WITHDRAWAL: When a participant wants to withdraw from the study, the data collected up to that point will remain part of the study database and may not be removed. All surveys are anonymous and there is no way to remove your information if you want to withdraw from the study. If the subject only answer some questions and not all questions survey will be removed from the study and the survey will be removed. If participant doesn't return survey, or survey is incomplete, the survey will be removed from the study. The data will be removed by not counting survey. Withdrawing participant whether he/she/they wish to provide with follow-up and further data collection researcher will accept participants survey.

If you have questions about this project or if you have a research-related problem, you may contact the researcher(s), Sonya Hendricks @ 480-650-9729. If you have any questions concerning your rights as a research subject, you may contact Northern Arizona University IRB Office at irb@nau.edu or (928) 523-9551.

NORTHERN ARIZONA UNIVERSITY

Office of Research Compliance

Project Number: 1983052-3
Approval Date: January 25, 2023
This stamp must be on all consenting documents

APPROVED

Online Survey Consent

By submitting this survey, I affirm that I am at least 18 years of age and agree that the information may be used in the research project described above.

APPENDIX D: DISSERTATION TIMELINE

1. Choose Topic/Methodology(Quantitative/Qualitative/Mixed	Date Projected______	Date Completed______
2. Select Chair/Committee There is a faculty expertise document in your handbook	Date Projected______	Date Completed______
3. Submit Recommended Dissertation Committee Form to Grad College/2 page study summary https://nau.edu/graduate-college/forms/	Date Projected______	Date Completed______
4. Select Professional Formatter and editor & establish timelines	Date Projected______	Date Completed______
5. Submit Completed Draft Chapter 1 to Chair	Date Projected______	Date Completed______
6. Submit Completed Draft Chapter 2 to Chair	Date Projected______	Date Completed______
7. Submit Completed Draft Chapter 3 to Chair	Date Projected______	Date Completed______
8. Schedule Prospectus Hearing Date (minimum 90 days prior to Defense Date)	Date Projected______	Date Completed______
9. Submit Prospectus Ready Manuscript to Committee (Minimum 10 days prior to Prospectus Date)	Date Projected______	Date Completed______
10. Submit Prospectus Presentation (powerpoint, prezi etc.) -5 days prior to Prospectus Date	Date Projected______	Date Completed______
11. Pass Prospectus Hearing. Obtain committee signatures or emails confirming a "pass". Be sure to submit your signed title page to Jennifer.Offutt@nau.edu for assemblage and submission of your candidacy application!	Date Projected______	Date Completed______
12. Review the number of EDL 799 taken and plan for a total of 12 units of EDL 799 registration by the time you defend your dissertation.	Date Projected______	Date Completed______
13. Open IRB File/Complete Applicationhttps://nau.edu/nau-research/research-safety-and-compliance/human-research-protection-program/irbnet/	Date Projected______	Date Completed______
14. Set Dissertation Defense Date/Time/Place	Date Projected______	Date Completed______
15. Submit Chapter 4 Draft to Chair/Committee	Date Projected______	Date Completed______
16. Submit Chapter 5 Draft to Chair/Committee	Date	Date

	Projected______	Completed______
17. Submit Defense Ready Manuscript to Chair/Committee (20 days prior to Defense Date)	Date Projected______	Date Completed______
18. Submit Defense Scheduling Form/Manuscript to EDL Dept/Grad College (10 days prior to Defense Date) https://nau.edu/graduate-college/forms/	Date Projected______	Date Completed______
19. Submit Manuscript to Grad College for format reviewetd@nau.edu	Date Projected______	Date Completed______
20. Submit Dissertation Presentation Slides to Chair/Committee/Grad Rep (5 days prior to Defense Date)	Date Projected______	Date Completed______
21. Successfully Defend Dissertation	Date Projected______	Date Completed______
22. Walk Across Stage Receive Diploma/Hood	Date Projected______	Date Completed______