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Walden University

College of Education

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Mary Taylor-Talley

has been found to be complete and satisfactory in all respects,
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the review committee have been made.

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Walden University

2018

Abstract

Academic Challenges and Success Strategies of Students with Dyslexia

Seeking a Two-Year College Degree

by

Mary Joyce Taylor-Talley

MA, Prairie View University, 1987

BA, Prairie View University, 1981

Project Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

Walden University

April 2018

Abstract

Dyslexia is a learning disability that hinders a person's ability to process elements of reading and writing. Although younger students with dyslexia often receive remedial education and accommodations, dyslexic college students may not receive assistance targeted to their individual needs. The purpose of this qualitative case study was to ascertain the challenges that might impede the academic success of college students with dyslexia and identify strategies used by academically successful dyslexic students at a 2-year college. Knowles's theory of informal adult education and self-direction provided the conceptual framework for the study. Using a case study design, 10 current college students who had a diagnosis of dyslexia with documentation on file at the college's student support center and a minimum 3.0 grade point average were purposefully selected to participate. Data from semi structured interviews and reflective field notes were analyzed using open coding to develop themes. Eight themes emerged related to Knowles' constructs; 4 as challenges (accelerated pace, communication, time management, and concentration) and 4 as strategies to improve educational outcomes (technical assistance, organization, support, and modification). A workshop and mentoring program were developed to provide academic support for college students with dyslexia, highlighting those areas that dyslexic students identified as challenging. Continued research on the educational needs of older students with dyslexia was recommended. Targeted interventions for students with dyslexia may result in positive social change by helping them achieve a higher education degree and become successful members of their communities.

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Dedication

First and foremost, this study is dedicated to my precious Savior, Jesus Christ, through whom all things are made possible. I would also like to thank the following individuals for their support, understanding, unconditional love, and guidance throughout this project and through my life: my Lord and Savior; my parents for my upbringing; and my brother, Thomas William Johnson, III, and his wife, Ida, for proofreading and making suggestions.

I thank my wonderful children. Carolyn stood beside me, helped me to overcome struggles as they arrived, and was the cornerstone of my success. Carolyn is constantly reminding me of my faith and the foundation of life that I gave to her growing up. To my other children, Chenee, Iris, Orris, Olivia, and Orran, thank you all for your encouragement and for reminding me that, because I would not let you give up, I had to continue to strive for my own academic success. I am grateful to my grandbabies who waited patiently for me to complete my assignments so that we could entertain one another. All of you have truly been a blessing, and I am honored to call you all my family.

Acknowledgments

I want to acknowledge Dr. McKee for, without her wisdom and understanding, I would not have made it this far. You are a jewel, and you will always be a part of my life. I would also like to acknowledge my second committee member, Dr. Emily Green, for her input and encouragement. I am grateful for her guidance. I also appreciate the support of my university research reviewer, Dr. Karen Hunt, who has been an important member of my committee.

To my colleagues, Maureen Searway, Jessica Brown, Krishna Channette, Jackie Joseph, Michelle Potter, Dalila Nichols, and Shirley Evans, I thank you all for prompting and assisting me along the way to continue with my project and not give up. I wish you all the best throughout your lives. To my good friend Miriam Summers, who gave up her time to become my peer buddy to assist me with my proposal, it has been a great adventure. I appreciate you, and I wish you the best with your project. Lastly, I would like to dedicate this paper to all the students with dyslexia who have suffered in silence. I am hoping that one day you all will find peace and harmony.

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Section 1: The Problem

Introduction

Students with dyslexia must overcome many challenges when attending college. With the support of caring teachers and the use of technology, more students with dyslexia are attending and graduating from colleges in the United States (Bell, 2013). When students with dyslexia enter college, they may not be aware of available resources or apply for assistance because they fear being ridiculed by other students, according to the district's special education director. College students with dyslexia are offered support from the student service center, but they are not required to accept such support (Sakai, 2017). Most colleges in the United States offer tutoring, mentoring, and various reading and writing centers to assist students (Bell, 2013), but students with dyslexia might be reluctant to use these resources because they do not want to share the fact that they have a disability.

Although previous researchers have acknowledged that dyslexia is a learning disability, more research is needed to investigate strategies used by dyslexic students to overcome their barriers while attending college (Pino & Mortan, 2014). In this study, I ascertained the challenges that can impede college students with dyslexia and identified the strategies that are being used by academically successful dyslexic students at a two-year college. Because more dyslexic students are entering college (Pino & Mortan, 2014), there is a growing need to bridge the gap between dyslexic students who are academically successful and those who are not.

The Local Problem

Students with dyslexia attending a rural college in the southeastern United States face educational challenges that could prevent them from obtaining a college degree. Having a limited attention span is a learning barrier associated with dyslexia that prevents students from comprehending and understanding course requirements (Armstrong & Humphrey, 2009). Other possible factors impacting learning and contributing to students' challenges with comprehension are limited writing skills and difficulty in analyzing written problems (MacDonald, 2009). Academic barriers affect the success of college students with dyslexia because they cause low self-esteem and a lack of motivation.

The rural college in the southeastern United States that was the focus of the study is an educational institution serving approximately 8,600 students from diverse learning backgrounds and demographics. Students at the college range in age from 18 years to older than 65. The college offers traditional and nontraditional learning environments in its associate degree and certificate programs. It also provides services to students with cognitive disabilities to help them to become academically successful. The college offers day and evenings classes, independent studies, and online/hybrid classes. As Exley (2013) noted, the offering of flexibly-scheduled and/or online courses can be particularly helpful for students with dyslexia.

Before strategies to improve the academic achievement of students with dyslexia can be implemented on a college campus, it is important to identify the perceived barriers to the dyslexic students' success. Learning might be jeopardized by dyslexic students'

hesitancy or refusal to disclose their disability to the student service center on campus (Morin, Crocker, Beoulier-Bergeron, & Caron, 2013). Students with dyslexia have sometimes been identified as underachievers because they have deficits in their reading and writing skills that hinder them from achieving academic success (Jameel, 2011). The students with dyslexia need additional resources to help them overcome the problems that deter them in the classroom setting.

To find ways to address learning disabilities, including those related to dyslexia, administration at the two-year college in this project study created the student service center. Students who use the student service center receive accommodations such as having additional time to turn in assignments, correct assignments, and submit research papers. Although the college in this study has an assistance program at its student service center, it has not focused on the specific educational needs of students with dyslexia. Academic barriers must be identified and addressed if dyslexic students are to succeed in college.

Rationale

According to Bell (2013), one of the goals of academic institutions should be to educate students successfully, despite any handicaps the students might have. Bell (2009), asserted that some dyslexic students' needs were not being met on the college level. As a result, the students failed classes or dropped out of school. Students with dyslexia who enroll in college programs want to obtain degrees to further their educational goals but may not be aware of the challenges they will experience in rigorous academic programs

(Lawson, Gould, and Conley, 2016). All students, regardless of disability or handicap, should have equal access to a higher education degree.

Rello, Baeza-Yates, Dempere-Marco, and Saggion (2013) conducted a study of students with dyslexia to determine ways to increase reading comprehension. They suggested that providing text with shorter words that are common to students with dyslexia will enable these students to comprehend text and read faster (Rello et al., 2013). Dyslexic students who are struggling learners might be able to use strategies that their dyslexic peers use to be successful in college (Mortimore, 2013). Students with dyslexia should be able to validate their knowledge by demonstrating the ability to comprehend and interpret reading passages, as well as to write assigned topics fluently.

The number of students with dyslexia admitted to colleges in the United States is increasing (Pino & Mortan (2014), but data regarding helpful learning strategies for students with dyslexia has been limited (Gibson & Leinster, 2011). Students with dyslexia have reported difficulties in reading, spelling, and expressing ideas that have affected their note-taking and organization skills at the college level (Carter & Selman, 2012). Identifying the academic needs of students with dyslexia may allow the faculty and staff at any college to help these students to overcome barriers and become academically successful.

According to Kirwan and Leather (2011), students with dyslexia should learn how to develop problem-solving tactics as an alternative to the predictable learning patterns they've used in the past. Predictable techniques are guidelines that students use to be

successful, whereas problem-solving tactics allow the students to be creative in completing academic tasks successfully (Kirwan & Leather, 2011) Researchers have also asserted that students with dyslexia should not be afraid to discuss their disabilities with the personnel providing services at student support centers (Tan, Hughes, & Foster, 2016; Singleton, Horne, & Simmons, 2009). Failure to identify the lack of concentration skills, writing issues, and reading skills among students with dyslexia hindered these students' academic progress and resulted in them suffering in silence.

Students with dyslexia often do not manifest profound difficulties with literacy skills because they have compensated for their weaknesses through the use of other means to be successful (Singleton et al., 2009). For example, students compensating for reading disabilities may engage peers to complete their assignments or ask to borrow their peers' reading assignments. I conducted this project study in order to identify the learning barriers that students with dyslexia encountered while attending the rural school I examined and enable the staff at the college to develop the resources needed to ensure educational success for dyslexic students.

The first widely publicized entrance of students with dyslexia into U. S. colleges began after the enactment of the Americans with Disabilities Act in 1990 (Pryor, Hurtado, DeAngelo, Blake, & Tran, 2010). Because of the American with Disabilities Act and better assessment in public schools, the number of students with dyslexia and other LDs entering U. S. colleges has increased significantly (Callen, Tops, & Brysbart, 2012). The increased LD enrollment requires additional resources at the college level (Lovenheim & Owens,

2014). According to Morin (2013), only 24% of students with LDs inform postsecondary schools about their needs and only 17% of postsecondary students with LDs receive accommodations and support from the college. It is important for LD students to identify their disabilities and use the resources available to them while attending college

The purpose of this qualitative study was to (a) ascertain the challenges that impede college students with dyslexia and (b) identify strategies that are being used by academically successful students with dyslexia at a two-year college. A case study design was used to generate the data. The results from the study may assist low-performing college students with dyslexia in achieving a college degree.

Definitions of Terms

Congenital word blindness: The inability to read and write despite mental intelligence (Castle & Friedman, 2014).

Dyslexia: An LD that mainly affects individuals' progression of reading and language arts skills (Kirwan & Leather, 2011).

Gross motor skills: Large muscle control that is required for movement (Barnett, 2014).

Orthographic processing: A person's ability to use letter patterns to read regular and irregular words (Shaul, 2012).

Phonemic awareness: The ability of individuals to perceive and perform aspects of language such as rhymes and syllables (Callen, Tops, Stevens, & Brysbaert, 2014).

Rhymes: Words that match the sounds of vowels and consonants; for example, star rhymes with car (Shaul, 2012).

Phonological awareness: The input and output units of listening and speaking skills (Kwok & Ellis, 2014).

Significance of the Study

In developing this project study, I obtained an in-depth understanding of dyslexia, which I plan to share with dyslexic students, professionals in the community, educators, and parents. I want others to know about the challenges that college students with dyslexia face, as well as recognize the strategies that can be used to overcome those challenges. This study contributed a better understanding of the learning barriers faced by students with dyslexia enrolled in a rural college in the southeastern United States. Identifying the strategies that successful dyslexic college students used might help other college students with dyslexia to become academically successful. The results of this research may provide effective learning techniques for students and the professionals who work with them in order to bridge the academic gap between dyslexic students and their non-dyslexic peers. I expect that all stakeholders will be enlightened about the barriers to learning for college students with dyslexia so that additional resources can be provided through the college's student support services.

Research Questions

The purpose of this qualitative study was to (a) ascertain the challenges that can impede college students with dyslexia and (b) identify strategies that are being used by

academically successful dyslexic students at a two-year college. Two central research questions were used to guide this study:

RQ1: What challenges do current college students with dyslexia experience that hinder their academic success in college?

RQ2: What strategies have current college students with dyslexia implemented to modify or eliminate any impediments to be successful in college?

Gibson and Leinster (2011) stated that students with dyslexia possess inadequate written language proficiency, a lack of concentration, poor auditory discrimination, and ineffective processing skills that cause them to perform below expectations in college and risk academic failure. I conducted this study in order to provide students with dyslexia who are currently attending college an opportunity to share the academic challenges they face and identify their personal strategies for being successful while attending college.

Review of the Literature

I searched the following databases to select peer-reviewed journal articles and other sources of scholarly information: Sage Full Publications, ProQuest, Google Scholar, and ERIC. Key search terms were *dyslexia*, *dyslexia and the college student*, *dyslexia in higher education*, and *dyslexia defined*. I used the results of my searches to develop the conceptual framework and organize the literature review. The conceptual framework of this study was based on Knowles' (1980) theory of informal adult learning, self-direction, and the teaching of adults. The review of pertinent literature provides details about dyslexia and the barriers that students with dyslexia encounter while attending college.

Conceptual Framework

In developing the study, I used Knowles' (1980) theory of informal adult education, self-direction, and the teaching of adults. Knowles developed a five-step model to identify the ways in which adults learn: (a) diagnose the learner's needs, (b) formulate the learner's needs, (c) identify learning materials, (d) provide resources for learning, and (e) choose and implement the most appropriate learning strategies (Knowles, 1980). Knowles encouraged learners to identify their needs, set objectives, and enter learning contracts to become successful. Knowles also stated that adult learners must accept and respect themselves while motivating themselves to improve as adult learners.

Knowles (1980) used problem-based skills and collaboration between adult learners to improve their learning skills. When teachers and learners share their successes, they gain mutual respect for one another (Goldstein, Venker, &Weng, 2014). Knowles' (1980) posited that teachers must gradually move adults toward independence by providing regular feedback and giving learners the opportunity to voice opinions about teaching methods, goals, and learning styles.

Knowles (1980) also proposed that learners rely on previous experiences and knowledge when learning new concepts. When given the opportunity, adult learners learn the most efficaciously when they apply their own life experiences to classroom learning. According to Knowles (1980), mature individuals become motivated to learn, and their learning becomes more personal when they have shared their knowledge. Another method used by adult learners is reflection. Reflection allows individuals to identify what they want

to learn, how they learn, and how they can apply learning goals to future efforts (Pirttimaa, Takala, & Ladonlahti, 2016). These methods are used by dyslexic college students to overcome barriers to academic achievement and guide the development of emerging themes for this study.

Knowles' (1980) advised adult learners to reflect on their strengths while acknowledging their struggles with learning. As Brunswick (2012) noted, students with dyslexia who have learned ways to overcome academic difficulties can coach and mentor other students with dyslexia. Because their learning is now a personal experience, they are motivated to share techniques that they have found to be invaluable in the learning environment. The process of assisting other students with dyslexia gives dyslexic students opportunities for continued reflection on creative ways to overcome challenges (Pino & Mortri, 2014). In the educational field, collaboration strengthens the learning outcomes and provides a basis for skill development.

Review of the Broader Problem

Various other terms have been used for the word *dyslexia*. Peelen, He, Han, Caramazza, and Bi (2014) noted that Kussamaul was the first to define dyslexia in 1878, originally referring to the disability as *congenital word blindness*. Morgan (1896) mentioned that Berlin was supposedly the first to use the term dyslexia in 1867. Both terms, *congenital word blindness* and *dyslexia*, have been used to define the disability that students with dyslexia face when reading. Rello et al. (2013) asserted that dyslexia is an unseen challenge, meaning that individuals who are dyslexic are unaware of their disability

when they are reading and writing. Although Gribben (2012) agreed that reading plays an important part in the capability of students with dyslexia to advance, he argued that the LD is more complex than just a reading problem. Dyslexia also affects organizational skills, memory, and cognitive processing.

Typed information helps students with dyslexia to process the meaning of words and gain a better understanding of what they are reading. Rello et al. (2013) recommended that students with dyslexia be given information to read that has been typed using font such as Helvetica, Courier, and Verdana. Although some researchers have recommended Ariel, it should not be used. It decreases the readability of text. Even students without disabilities have difficulties reading and writing text in Ariel (Rello et al., 2013). In contrast, Brunswick (2012) conducted a study of students with dyslexia and found that they preferred the Syllexia font, which is based on handwriting that makes it easier for students with dyslexia to read.

Researchers have not yet found one definition to describe dyslexia (Kalyvioti & Mikropoulos, 2013). Although researchers have associated dyslexia mainly with reading, writing, and spelling difficulties, it also has been associated with problems having to do with memory and vision. The organizational skills of students with dyslexia are often limited, affecting their ability to encode, decode, store, and retrieve information (Kalyvioti & Mikropoulos, 2013). Horowitz-Kraus and Breznitz (2011) noted that the struggles of dyslexic students with written language are not limited to single words; they also extend to the contextual level. Several reasons have been proposed to explain the challenges of

dyslexia: These include “phonological barriers,” “orthographical barriers,” “speed of processing barriers,” and “working memory barriers” (Horowitz-Kraus & Breznitz, 2011, p. 12). Gribben (2012) stated that because dyslexia is difficult to define, it is challenging to find and use strategies that will accommodate the needs of students with dyslexia.

Obtaining an early diagnosis of dyslexia is important when an individual shows symptoms of the dyslexia disorder. Students with dyslexia who receive multisensory practice and manipulating reinforcement in the primary grades are able to increase their processing abilities later in life (Castle & Friedman, 2014). The more skill-development practice that students receive after being identified as dyslexic, the more likely it is that the sensory receptors and processing regions of the brain will improve.

College students with dyslexia who were not identified in the earlier years of their education did not have the opportunity to practice various interventions to strengthen their visual grapheme, letters and numbers, and phonemic elements in words. Castle and Friedman (2014) suggested that although students might have received early diagnoses and interventions, they still might not be able to comprehend or retain what they have read. According to Knowles, Holton, and Swanson (2014), students with dyslexia are interested in learning, but might be more focused on the anxiety, frustration, and thoughts of failure that can accompany dyslexia. Although dyslexia is a LD resulting in a deficit of literacy skills, students with dyslexia are capable of learning. In order for students with dyslexia to be successful, certain procedures must be addressed, including analyzing their needs, selecting and applying the most appropriate learning strategies, and assessing successful

learning outcomes (Kirwan & Leather, 2011). Self-supporting students with dyslexia may enter college with reduced literacy skills but they can take the initiative to improve academically with or without the support of colleagues or family members.

Students with LD, according to Knowles (1980), might lack the initiative to motivate themselves, and this lack of motivation could become another barrier to academic success. According to McKendree and Snowling (2011), students with dyslexia can overcome any obstacle in higher education by seeking assistance and attending tutorials. Although many students with dyslexia hide their deficiencies well, it can be challenging for teachers to comprehend their barriers to learning (Bell, 2009). Consequently, some individuals may not view dyslexia as being a handicap, which makes it difficult for teachers to render assistance

Students who acknowledge their deficiencies have accepted and understood their reading disabilities and have taken decisive actions to limit the adverse effects of dyslexia (Armstrong & Humphrey, 2009). Alden and Pollock (2011) conducted research with four groups of students with dyslexia. The first group had problems extracting information from text and completing writing tasks; the second group lacked an understanding of abstract concepts; the third group had significant weaknesses in sequencing and organizing tasks; and the fourth group had difficulty retaining information and had to talk through ideas to complete tasks. Alden and Pollock (2011) concluded that teachers must recognize the cognitive weaknesses of students with dyslexia in their setting. The instructor should not make the process of information complex for the dyslexic student but make simple

adjustments to support students with dyslexia who are struggling in class. For example, students with dyslexia should be encouraged to focus on their strengths, not their weaknesses. Callens et al. (2014) asserted that teachers need to demonstrate empathy while understanding the frustrations related to the learning difficulties experienced by students with dyslexia.

Dyslexia and college students. Many college students with dyslexia elect not to apply to the student support centers to access services needed to help them to overcome their barriers (Nijakowska, 2016). Because of their fears of being labeled or put down, they refuse the help from support staff that will assist them to become academically successful. Although the student support centers provide accommodations for students with dyslexia, Washburn, et al. (2014) contended that teachers still must acknowledge dyslexia as being a LD and help these students by providing them with additional accommodations. They suggested that teachers give students with dyslexia lesson plans in ways that present the content so that it is comprehensible to them. This method will benefit all students in the classroom setting regardless of whether or not they have a disability.

According to Burns and Bell (2011), dyslexic students' academic needs are not being met; consequently, students with disabilities risk failing and dropping out of college during their first year. Robson (2014) stated that because dyslexia affects many college students, colleges are legally bound by the Disability Act of 1990 to provide support to students with dyslexia who disclose their disabilities to them. Robson (2014) further noted that even though students with dyslexia might have compensated for their challenges

throughout their earlier years of school, the challenges might manifest or become more prevalent once they enroll in college.

One way that students with disabilities attending college might compensate for their learning deficits is by relying on their meta-cognitive skills. These skills allow LD students to analyze what they know about a word and translate the word or take a portion of the sentence and translate it as well (Nielson, 2011). Schraw (2011) noted that by planning and preparing knowledge to be presented to LD students, they might begin to think about what they need to know and how to accomplish it. Some students with milder forms of dyslexia may not show profound difficulties in reading and writing because they have developed personal strategies to compensate (Singleton et al., 2009). Because students with dyslexia learn best through trial and error, they might have to try a variety of methods before they are capable of successfully completing a specific task (Tafi, 2014).

Meiri (2011) compared thoughts and knowledge using mental images between dyslexic students with a reading disability and skilled adult readers to determine whether reading required both skills. Mental images are pictures that an LD student can imagine in their minds to help them identify the word. The results indicated that readers with dyslexia had deficits in implied learning and that the discrepancy was more profound when the task was verbal. Singleton et al. (2009) stated that students with dyslexia who enter college often can read and spell well but can be slow readers who have significant problems completing tasks. Researchers have identified other barriers that students with dyslexia might have, such as taking notes, writing essays, and completing written examinations

(Cavalli, Casalis, El Ahmadi, Zira, & Poracchia, 2016). Researchers have agreed that students with dyslexia need additional academic support from primary grades to post-secondary schools. Israel and Olubunmi (2014) noted that if dyslexic students are to be successful in college, they must be given access to a variety of methods to ensure that their needs are being met. Instructors can offer study guides or provide a learning skills sheet to complete and return.

Students with dyslexia can be successful if they have the will to succeed, are sure of their goals, and are willing to face their learning barriers. Dyslexic students have been found to have slower reading skills than their peers, and a lack of cognitive skills to master tasks (McKendree & Snowling, 2011; Shaul, 2012). Therefore, students with dyslexia who are attending college should notify the appropriate individual(s) about their LD so that they can receive additional support (Robson, 2014). According to Bell (2013), students with dyslexia should monitor their workloads and lifestyles, as well as implement better organizational skills, if they are to be successful academically.

How students with dyslexia learn remains a strong focus of research. Griffiths (2012) conducted a case study with teachers of dyslexic students who had challenges in reading, writing, and organizing; faced attention deficits; and had low self-esteem. Griffiths (2012) recommended that colleges create a learning climate that supports and identifies students with dyslexia needs, and that teachers should realize that the problem lies not only in the disorder itself but also in the way in which others view and treat students with dyslexia. In contrast, Chapman and Tunmer (2014) conducted research on poor literacy

levels in New Zealand. They studied adults with reading difficulties and adults with non-reading difficulties to explore the benefits of remedial reading and special education class interventions. The results indicated that the adults did not benefit as much from school-based programs because literacy performances in adults needed different approaches than children.

Dror, Makany, and Kemp (2010) studied a group of participants with dyslexia and a control group using note-taking skills that were either linear or nonlinear to determine which methods the students with dyslexia preferred. Linear note taking refers to outlining relevant information, and nonlinear note taking refers to using charting, mapping, and guided notes. Dror et al. (2010) also examined the participants' cognitive skills in such areas as memory comprehension and organizational skills. The results identified several resources that might benefit students with dyslexia: assistive technology, remediation, and modification of course content. Similarly, Brunswick (2012) found that dyslexic students often apply methods, procedures, or mechanical assistances to help them to manage or even hide their academic barriers. For example, students with dyslexia memorize words rather than sound them out or break words into syllables to enunciate. Brunswick (2012) stated that these students often avoid situations that require reading and writing, but they may implement other means to accomplish the task by using spell check, recording lectures, or asking others for assistance. Greater time and effort are often spent by dyslexic students to accomplish even the simplest task.

Burnswick (2012) stated that activities affect dyslexic students in their verbal and written language, as well as in retention and the capability to think, learn, or comprehend. Reasonable adjustment in higher education should take into consideration the needs of disabled individuals or at least accommodate their requirements to achieve their learning outcomes (Burnswick, 2012). Sheftel, Lindstrom, and McWhirter (2014) agreed that there appears to be a gap in learning achievement because the scores in reading, writing, and mathematics tests are lower for dyslexic students than their peers in school. Because dyslexia impacts learning in diverse ways, it is imperative that research continue in an effort to bridge the gap between low-performing students with dyslexia and students with dyslexia who are successful in college.

Students with dyslexia might not perform as well in college as their non-dyslexic peers because of their lack of comprehension, inadequate writing and spelling skills, and their struggle to comprehend college material. Banai and Ahissar (2010) believed that the processing and mechanism skills of students with dyslexia are impaired in many ways. According to Gibson and Leinster (2011), students with dyslexia are prone to stress, lack concentration and structural skills, and have inadequate coping skills. The lack of these skills often results in academic failure. Fichten, Nguyen, King, Barile, Havel, Mimouni, and Asuncion (2013) noted that students with dyslexia often avoid language arts and other subjects in college requiring intense English language skills. Therefore, they can be at risk of failing core classes, and try to solicit their peers to complete their assignments.

According to Bucci, Bui-Quoc, and Gerard (2013), students with dyslexia pursue their dream of attending college, despite their weak processing skills. Bucci et al., (2013) further stated that students should be interviewed routinely about their successes and problems in college, and interventions should be established that will be beneficial to the dyslexic students' academic success. Teachers should help dyslexic students to identify their deficiencies, strengths, and weaknesses so that they can understand their reading abilities. Students who might be dyslexic should be identified as soon as possible and preferably before entering college or a trade school. This process of identifying students who need extra assistance could be established by teachers when monitoring assignments pertaining to comprehension and written exercises.

Although college students with dyslexia are given the same assignments and materials as their non-dyslexic peers, teachers can implement resources and interventions to ensure the likelihood of success for struggling students. Examples of interventions are longer completion times, mind mapping, modified assignments, use of voice recorders, larger font on handouts, and shorter word groups (Wennas-Brante, 2010). Many students with dyslexia attempt to start or join focus groups to discuss assignments that will enable them to move forward with their peers.

Cognitive strategies approach. Students with dyslexia have reading levels that have identified them as slow readers in need of interventions (Hollins & Foley, 2013). For this reason, dyslexic students expressing literacy differences should be offered assistance to overcome their deficiencies (Neilson, 2011). Zakopoulou et al. (2014) also stated that

dyslexia has been studied as a nervous disorder, and the genetics of dyslexia have been examined as being inherited. Fostich, Ariel, Fur-El, and Ram-Tsur (2012) asserted that dyslexia is a neurocognitive syndrome with a hereditary origin that causes reading difficulties. Neurocognitive disorders involve the central nervous system and affect cognitive abilities that contribute to an individual's academic skills. Without the use of cognitive skills, students with LD cannot perform tasks from the simplest to the most complex (Fostich et al., 2012). This specific reading disability is known as developmental dyslexia.

Cognitive skills such as attention, retention, long-term memory, hearing processing, and reasoning skills are essential to conducting everyday tasks in school or on the job (Hollins & Foley, 2013). Attention span requires the ability to stay focused and remain on task for a period of time; selective attention allows one to handle multiple tasks at the same time (Hollins & Foley, 2013). These common cognitive task skills might be lacking in students with dyslexia.

According to Hollins and Foley (2013), the skills needed to learn to read and spell are working memory, processing speed, visual processing, visual discrimination, visualization, auditory processing, and auditory discrimination. Working memory allows individuals to retain facts for small periods of time, whereas long-term retention allows individuals to collect and recall facts as needed. Processing material rapidly is the speed that the brain handles data. Graphic dispensation enables individuals to observe, examine, and reason in visual pictures; graphic perception allows individuals to see varied sizes,

shapes, color, distance, and orientation of objects. Visualization allows individuals to create mental images; without visual imagination, it is complicated to develop concepts/objects in the mind. The hearing processing is the ability to distinguish, examine, and hypothesize what is being perceived; hearing perception refers to hearing different reverberations, such as volume, tone, interval and phoneme, as well as combining other skills to form meaningfully units of word (Hollins & Foley, 2013). Students with dyslexia at the rural college in this study should be able to apply various methods of strategic learning to achieve their academic goals.

According to Glazzard (2010), students with dyslexia who exhibit a problem with controlling or managing their attitude, motivation, and anxiety while engaged in learning may not be able to achieve academic success. Positive attitudes and motivation might compel students with dyslexia to complete tasks or seek additional assistance to follow through with their goals. Anxiety in students with dyslexia should be managed and controlled during the learning process by the LD student. These cognitive approaches might help students with dyslexia to find new methods to solve and cope with problems.

Positive self-talk is another cognitive strategy that might allow students with dyslexia to take control of their learning by redirecting their thoughts so that they are more positive and realistic (Hallenbeck, 2014). Although the student support center provides some modification to students who are enrolled in the program, there are some students with dyslexia who might need more supportive instructions before understanding certain

concepts (Bell, & McLean, 2016). The dyslexic student's inability to concentrate and implement various reading skills while reading a passage hinders their academic progress.

Cognitive behavior is sometimes referred to as a combination of working memory, the ability to hold sensory memory, short-term memory, and long-term memory.

Manipulating information over time is called working memory capacity (Ghani & Gathercole, 2013). When students with dyslexia enter college, they are faced with the same input of information as their peers, and they are expected to produce the same outcomes.

Horowitz-Kraus and Breznitz (2011) noted that cognitive tools are instruments that are valuable in learning to read and write. When given the tools to become successful in college, students with dyslexia might gain more self-control, develop their problem-solving skills, and develop various coping strategies (Rouse, Alber-Morgan, & Sawyer, 2014).

Rouse et al. (2014) further stated that self-instruction training might help students with low cognitive skills to become motivated and better problem solvers. Self-instruction training teaches students to make appropriate decisions and provides suggestions to guide their behavior.

Reading and writing acquisition. According to Callen et al. (2014), reading and writing might be difficult tasks for students with dyslexia because of such other challenges as high anxiety and the lack of problem-solving and motivational skills. Although students with dyslexia are poor readers, they also have linguistic problems that are associated with phonological encoding (Verhoeven, Reitsman, & Siegel, 2011). Linguistic problems refer to delayed language issues such as the method in which words are pronounced or heard; the

method in which individual hear the sound of words and repeat them (Verhoevn et al., 2011). Perception and positive attention are prerequisite skills for reading, and they can have an effect on reading and comprehending what is being read. If these processes are delayed, linguistic problems occur, leading to impaired visual perception and memory.

Tops, Verguts, Callen, and Brysbaert (2013) stated that visual perception and memory play an important part in reading and comprehending passages read by students with dyslexia. Because of the process of retaining phonological information used to decode and comprehend, information may not be retained in the memory of students with dyslexia (Tops, et al., 2013). For this reason, reading and writing might be an arduous task for individuals with dyslexia because of the other challenges facing them, such as their high anxiety problems and the lack of coping and motivational skills.

Gore and Widiger (2013) identified five personality traits to analyze the personality profile of students with dyslexia since most students with dyslexia suffer from other conditions, as well. These include characteristics such as being open to new experiences or whether an individual is an introvert or extrovert. Callens et al. (2012) stated that ambient individuals are more outgoing while withdrawn individuals prefer to be isolated. The neurotic individual processes anger and shame, and open-minded individuals are curious and possess a rich imagination. The agreeable individuals are cooperative, friendly, and helpful, but the conscientious individuals are self-disciplined. Callens et al. (2012) determined that there were no differences in the personality profile between the student with dyslexia and their counter-peers. Although students with dyslexia face many

challenges, they do not perceive their abilities as different from their peers when given personality tests. Since many students with dyslexia are inadequate readers and have linguistic problems that are associated with phonological encoding, Verhoeven et al. (2011) suggested that an intervention to improve working memory might increase the reading skills of students with dyslexia.

Students with dyslexia need to retain phonological information to decode, comprehend, and retain written passages for longer periods in their memory for future reference (Verhoeven et al., 2011). Because students with dyslexia do not have the phonological information that they need to decode words and comprehend what they are reading for extended periods, their phonological working memory may have been jeopardized (Verhoeven et al., 2011). Having phonological working memory skills is considered a prerequisite to the development of effective reading skills.

Friend and Olson (2010) stated that many dyslexic students struggle with phonological awareness, an essential skill when learning to read and write. Students with dyslexia also have difficulty with word fluency. The dyslexia students often have difficulty sounding out words, so they rely instead on visual clues or memorization of words previously taught (Friend & Olson, 2010). The average readers and readers with dyslexia use neuropsychological mechanics to read. In other words, students with dyslexia use different regions of the brain than their peers do while reading. The students with LD have a deficit in the left hemisphere of the brain, while students who do not have dyslexia do not

have this deficit (Fostick et al., 2012). On-going research may provide additional insights into the inherent challenge of dyslexia.

Reading deficits. Students with dyslexia have impaired working memory that results in a lack of concentration when they are reading, so they rely on processes used early in life to recognize words (Verhoeven et al., 2010). When students with dyslexia are faced with a lexical or verbal process, their reading rate is slow. This places additional strain on their limited working memory (Fostick et al., 2012), and can cause assignments of LD students to be incomplete or late. Many researchers have noted that even though students with dyslexia might be able to decode words in the text or passage, they are significantly impaired in their ability to make inferences.

Fostick et al. (2012) stated that storage space in the word banks of students with dyslexia is limited based upon the number of resources that are processed, which indicates that students with dyslexia are more successful when they read passages that are short and simple. It is possible that the reading comprehension deficits of students with dyslexia might be connected to impaired memory and poor decoding skills. Singleton et al. (2009) further noted that converting new information into mental images might help to improve metacognitive strategies. When dyslexic adults are reading passages in college, they might lack the metacognitive reading skills to be able to understand the content and retain information for later use. Metacognitive skills are strategies used to develop a deeper understanding of the text or content area topic by drawing on previously learned information (Verthoeven et al., 2011). As a result, if reading text is to be measurable,

individuals must be able to understand sentences and process them by identifying the linguistic structure. Metacognitive skills are used reading larger and more complicated texts, which causes students with dyslexia to read and re-read the passage for clarity. Because of this lack of comprehension, students with dyslexia may have to skim the passage to locate information to answer comprehension questions (Tilanusi, Seger, and Verhoeven, 2016). This process is time consuming and frustrating, especially on timed material.

Cowden (2010) stated that visual perception plays a significant role in reading, and memory plays an important part in reading and comprehending because of the phonological processes used to decode information. Students entering college with low reading skills, poor handwriting skills, and spelling difficulties might be able to decrease their disabilities by following a structured phonic development that involves using letter sounds, awareness, and context to identify words (Boyle, Rosen, & Forchelli, 2014). Researchers noted that this phonological pattern or sound structure includes rhyme phonics drills to gain appropriate responses (Shaul, 2012). Programs could be offered by the student service center to provide additional rhyming practice for dyslexic students.

Writing deficits. According to Fostick et al. (2012), students with dyslexia cannot distinguish between the appropriate uses of homonyms or when the words are misspelled. Fostick et al. (2012) stated that punctuating sentences is another dysfunction of written language that students with dyslexia experience. Computers might be useful tools to use when student with dyslexia must complete written assignments. According to Peterson and

Pennington (2012), linguistics plays an important part in writing. Students must be able to integrate sound with the written word. Poor association of sound with writing movement may cause the writing of students with dyslexia to be impossible to read.

Fostick et al. (2012) suggested that the predominant difficulties of students with dyslexia might be in their auditory and visual processing of written language. Although they have writing deficits, students with dyslexia can use different strategies to improve their writing skills. One newer technique may involve the use of software such as Dragon that converts spoken words into text (Hamblet, 2014). Because many students with dyslexia experience difficulties with sound, letter recognition, and the lack of legible penmanship, they need devices to assist with their written tasks. Voice recognition software might be the ideal tool to assist dyslexia with their writing.

The literature review included the conceptual framework of Knowles' (1980) theory of informal adult education, self-direction, and the teaching of adults, as well as an overview of research pertaining to the education of students with dyslexia. I focused first on the challenges that dyslexic students face in a college environment, then identified literature that included research on the predominant reading and writing deficits that are common in students with dyslexia. Dyslexia continues to be a complex LD that makes it very challenging for students to be academically successful.

Implications

The results of this study identified the educational barriers that students with dyslexia encounter and the techniques used in which they have managed to function in

college to become academically successful. This study may provide students with dyslexia valuable information they can use to eliminate or lessen their challenges in the college setting. This research may also change dyslexic students' thinking about dyslexia being a disability, while improving their perceptions of their academic abilities.

Based on the results of the study, a mentoring program could be established to assist dyslexic students with their challenges while they are attending college. The mentoring program could be designed to teach students with dyslexia various strategies they may be able to use to achieve academic success. Students with diverse needs should be given an active voice, one that is heard and reacted upon to bring about a change in the interventions that are catered to each dyslexic student's individual needs (Brandt & McIntyre, 2016). Therefore, a mentoring program would assist students with dyslexia to use their voices to identify their needs and speak up for themselves when they need additional support.

Another tentative direction for the project could be a 3-day faculty development workshop to present the learning challenges of dyslexic students in higher education to instructors. Faculty could be trained to use teaching techniques that would benefit all students, but particularly dyslexic students who may struggle to achieve academic success. It is important to provide strategies that will guide the students with dyslexia entering college and support other dyslexic students in need of assistance to overcome or lessen their challenges while attending college.

Summary

In this section, I focused on the barriers that students with dyslexia encountered and discussed the strategies that might help them to be successful in college. The lack of word recognition skills, poor comprehensions skills, and low reading skills are some of the reasons for the potential lack of academic success of college students with dyslexia. College faculty and staff can provide additional resources to assist LD students.

In Section 2, I describe the research design, explain how the participants were selected, and discuss the data collection and data analysis protocols that were used in this qualitative case study. Section 3 includes all relevant aspects of the project that is derived from the research results. In Section 4, I provide reflections on the learning outcomes I achieved.

Section 2: The Methodology

Introduction

Students with dyslexia attending the rural college in the southeastern United States encounter many hardships while trying to be academically successful and graduate in a timely manner. These same students may fear being labeled as “stupid,” “dumb,” or “lazy.” Dyslexic students have reading and writing challenges that may cause them to perform below college expectations. Staff at the rural college’s student service center say that some students with dyslexia have registered for services, but some students with dyslexia have not. If students with dyslexia choose not to register for academic support, it is difficult for the administrators in the student service center to determine the actual percentage of students in need of assistance. Generally, all students with dyslexia want to be part of the college community and not made to feel inferior. The results of this research may help college students with dyslexia to find methods to modify or overcome their learning challenges so that they are successful in college.

Research Design and Approach

I selected a case study design for this qualitative study. Merriam (2009) stated that a case study approach is descriptive and investigative in its purpose. A case study design provides in-depth information and insight about the participants within a specific framework. Other designs that I considered but rejected were phenomenological, grounded theory, and narrative. Although I examined individuals’ intense life experiences, I did not select a phenomenological design because the research was not philosophical in nature. A

grounded theory or narrative design was not appropriate because I wanted to know the individual academic challenges of the dyslexic student rather than develop a theory. Although a narrative theory is used to delve into individual issues, I was more interested in building a close relationship with the participants to gain in-depth information about dyslexia in college students.

A case study design was appropriate for this study because I could concentrate on the participants' individualized experiences with dyslexia. With a case study design, the researcher must be able to think quickly during interviews, cover in-depth details, present a wealth of knowledge to its readers, and keep the conversation equally distributed among the participants (Galbraith, 2004). Merriam (2009) noted that a case study cannot be easily generalized to a wide population and can be prone to bias, but the design allows for a vivid description of events.

Lodico, Spaulding, and Voegtle (2010) stated that a case study is the most common approach used by qualitative researchers because it focuses on small groups or individuals within a group who share experiences in a specific setting. I used a case study design to examine the strategies that college students with dyslexia use to overcome or reduce learning barriers and become academically successful. With insights gained from the case study, successful dyslexic students can share their learning approaches with similar students who are not as academically successful, in order for them to achieve their educational goals. Recognizing and using strategies used by successful college students

with dyslexia may give struggling dyslexic students an opportunity to overcome their academic difficulties while attending college.

Participants

I selected 10 participants using purposeful sampling, a method that allows researchers to choose their participants based upon the research problem and the research questions (Creswell, 2009). Lodico et al. (2010) and Merriam (2009) stated that purposeful sampling allows researchers to select individuals according to their study parameters and to gain rich information. The participants were current college students with dyslexia who were 18 years or older and attending the rural college at the time of the study. They had to have a grade point average (GPA) of 3.0 or better in order to participate in the study. The participants were required to have been diagnosed by a physician or a psychologist as having dyslexia, although a participant's self-report of having been diagnosed as being dyslexic was acceptable in this study.

Before beginning data collection, I contacted the Institutional Review Board (IRB) at the research site to explain the purpose of the study and gain permission to conduct the study. After obtaining IRB approval from the college and from Walden University, I visited the student support center at the college to discuss my research. I explained to the staff that I had received permission to conduct my research about dyslexic students and their challenges while attending college at their campus. I showed them the approval letter that I had received from their school as well as my flyers. I asked the student support center's staff at the college if I could post flyers on the bulletin board in their building about my

research project. After the staff reviewed my flyers, they volunteered to post the flyers for me, and I agreed to their request. The flyers consisted of the purpose of the study and my name, e-mail address, and phone number.

When potential participants contacted me by e-mail or phone, I provided them with detailed instructions, so they could decide if they wanted to participate in the study. I instructed the individuals to send me an e-mail requesting to participate in the research and I would send them an e-mail containing information about the research and a confidential contract for their review. I advised the prospective participants that they had 24 hours to review the informed consent form and send it back to me by e-mail if they wanted to participate in the research. In the e-mail, I explained that the return of the informed consent contract indicated their consent to participate in the research. I also spoke to each of the prospective participants by phone and provided additional study details.

When I received the e-mail from a prospective participant with his or her willingness to participate, I immediately returned an e-mail with three different dates and times to choose for the interview. Each participant sent the e-mail to me with the date and time chosen. I sent a return e-mail stating that I agreed to the time and date that was chosen for the interview. I further advised the participants that they should contact me to reschedule if they could not attend the interviews.

I greeted each participant as he or she arrived at the scheduled interview, then I again reviewed the information about the study. I read the informed consent document aloud to each participant before the interview began, and the participant followed along as I

read. During the interviews, as an ice breaker, I asked the participants about their college majors and how long they had been enrolled in the college. I allowed time for questions before and after each of the interviews, and I assured the interviewees that their responses to the interview questions were confidential, and that pseudonyms would be used for all participants in order to protect their rights.

I used a sample size of 10 students for two reasons. First, a staff member of student support services at the rural college stated that only a small number of students at the college have requested academic accommodations for diagnosed dyslexia. Second, I wanted a deep and robust discussion with each participant. The smaller sample size provided an opportunity to acquire a better understanding of the dyslexic students attending the rural college.

I put measures in place to protect each participant's rights. I maintained confidentiality by using pseudonyms, rather than the participants' names. I also kept contact and scheduling information, including the dates and time for the interviews, in a journal in a locked file cabinet in my home office, and I am the only one with a key. I stored all notes, informed consent forms, and transcribed/recorded data in the locked file. I informed all participants that they could withdraw from the research at any time without repercussion. I also explained to the interviewees that the study would not cause undue harm to them, and that they would not receive any tangible items for their participation in the research.

Data Collection

After collecting the confidential consent forms and verifying the dates and times of the interviews through e-mail contact, I met each participant at the designated time and place. I conducted the private interviews using a conversational tone in a secluded area of the library that offered a relaxed atmosphere familiar to the participants. The interviews consisted of 17 face-to-face semi-structured interview questions with each of the 10 dyslexic students at his or her preapproved designated time. Audiotaped field notes were used with the participants' permission. If any participants declined to be taped, I asked him or her to enunciate and I repeated the information as needed for clarity when I added their responses to my notes.

Reflective field-notes were taken to contemplate the transcribed information about the date, time, and additional questions the participants may have had. I recorded the participants' pseudonyms, the time the interviews began, and when the interviews ended. The field-notes were recorded without bias by being open to participants' answers to the interview questions. During the interview, I took notes about the student's appearance, gestures, and how each participant answered the research questions. All participants were dressed according to the weather. They answered the open-ended questions with very few prompts, and when I asked a question they responded with interesting detail. They appeared to be inquisitive and eager to participate.

Interview Questions

I used open-ended questions to invite probing queries and responses during the interviews with the participants. The time allotted for each interview was 60 minutes, and was appropriate for the semi-structured interviews, as it gave the interviewees time to ask questions. The questions were:

1. What challenges related to your diagnosis of dyslexia have you identified that make learning difficult for you?
2. What types of academic accommodations are available on campus for students with dyslexia, such as extra time for completion of assignments, small group testing, or additional time for tests?
3. What types of academic accommodations have you used? Were they helpful? If not, why not?
4. What types of academic support are available on campus for students with dyslexia such as peer mentoring, tutoring, seminars, or workshops?
5. What types of academic support have you used? Were they helpful? If not, why were they not helpful?
6. Does the college have tutors who understand specifically how to help students with dyslexia? How have they helped you?
7. What are some other ways that the college helps students with dyslexia? If so, do you have to pay extra for them?

8. What strategies have you used to overcome the challenges you face in order to become academically successful in college?
9. Which of the strategies were the most helpful? Why were they helpful?
10. What strategies have you tried that were not successful in helping you overcome academic challenges? Why were they not helpful?
11. What type of peer support do you have? How are your peers helping you?
12. What type of family support do you have? How are they helping you?
13. What type of support do your teachers provide?
14. What strategies are you using now that you feel might help low performing dyslexic students?
15. What advice would you offer to other students with dyslexia that might help them to be successful in college?
16. Would you like to share anything else?
17. Do you have any questions for me?

Reflective Field Notes and Taped Sessions

I collected data from the interviews and reflective field notes. The responses to the open-ended semi-structured interview questions gave me an in-depth understanding of the academic challenges that dyslexic students encountered in college and the strategies they used to be academically successful. According to McIntosh and Morse (2015), open-ended questions allow researchers to obtain detailed answers and understand the participants' point of view. Each participant discussed the barriers and strategies relevant to them

openly, honestly, and calmly. Their responses were written in my field notes and audiotaped with permission.

The data from the audiotaped sessions and the field notes allowed me to review the participants' answers to the interviews that were collected to compare notes and make corrections as needed from the verbal dialogues of the participants during the interviews. Each interview was transcribed and coded immediately, saved on my encrypted laptop, and stored in my locked file cabinet in my home office.

Role of the Researcher

I am employed as a special education teacher in the southeastern part of the United States as an in-school suspension (ISS) teacher. The ISS setting is very structured, and its purpose is to teach social skills using the curriculum of *Why Try* (Moore, 2006). I conducted this study at a two-year college in the southeastern United States. I have no current involvement with the school or the participants. I traveled there only to collect the data for the study. My involvement with students with dyslexia in the middle and high school in the public-school system prompted my interest in identifying methods to help college students with dyslexia become successful. Using a sample of participants with whom I am unfamiliar minimized any personal bias.

Data Analysis

I considered the authenticity, credibility, accuracy, and the participant responses to the interview questions diligently in preparation for coding. Glense (2012) stated that coding is a method used to define and collect data for research. Therefore, after studying

the data I received from the participants for authenticity and credibility to each research question, I found the data to be trustworthy according to the information given by the participants.

The data in this case study were collected from the semi-structured interview questions, audio sessions during the interview, and field notes. I recorded the participants' responses to the interview questions and then transcribed them immediately while the information was fresh. The responses from the participants were coded according to the themes that were generated from the interviews.

Coding

Coding is a process of collecting and identifying parts of the data that describe the case study and giving broad category names to the themes (Lodico et al.2010). Open coding was categorized according to the data. Merriam (2009) identified open coding as a process of identifying information that might be valuable in answering the research questions. I used sticky notes in this study for quick references to give a summary of the transcribed themes. After I read the questions, their inputs were color coded according to topics or phrases given to each response. I examined answers to the interview questions and review of the transcribed field notes for clarity and precision. I coded the participants' responses to the interview questions by hand, according to their available resources, successful strategies used, and support from others. During this process, I noted phrases of the major and minor themes and organized them according to the themes I identified.

While working through the process of hand coding the data, I found it to be very tedious, but informative. Coding responses from the students' interviews generated 25 general constructs that needed to be further reviewed and sorted. A minimum of 16 coding sessions where I examined the themes and reflected over the field notes taken during the interview provided the opportunity to combine concepts more concisely, thereby reducing the number of themes. After all coding had been thoroughly analyzed, I organized the eight final themes that emerged from the coding process. Four of them were specific to the first research question and four answered the second research question.

Evidence of Quality and Accuracy

The integrity of the results was enhanced by using triangulation, member checking, peer debriefing, and minimizing researcher bias. Triangulation from field notes and interview responses supported the themes that emerged from the data collection. Member checking provided trustworthiness of the transcribed interview responses by giving the participants an opportunity to read through the draft findings for accuracy and viability in the setting.

A peer reviewer examined the data to check the logical development of themes, review the results, and consider the conclusions. The reviewer also sought to identify potential sources of unintentional bias. These procedures provided support for the evidence of quality and accuracy within the study.

Triangulation. According to Glense (2011), triangulation in qualitative research involves the convergence of multiple data collection sources. Through triangulation, I used

several sources to assure the credibility and trustworthiness of the data obtained from the input of the participants. First, I asked participants to review the draft findings for viability in the setting and for the accuracy of the researcher's interpretation of their own data used in the study's results. Participants were permitted to change or leave the documents as written.

In addition to verifying the participants' responses, I reviewed current literature to determine if the themes that evolved in the study were consistent with those found by other researchers. According to Merriam (2009), it is important to note whether the findings in one study can relate to other situations. The fact that the participants in the study were college students did not appear to minimize the challenges faced by all students with dyslexia. Regardless of age, the difficulties of using word processes, written comprehension, and writing deficits are common findings (Fostick et al., 2012)

Finally, a professional colleague who has a degree in special education reviewed the study findings, verifying the emergent themes that were identified. This additional oversight ensured the credibility of the study, the dependability of the study results, and the minimization of any potential researcher bias.

Member checking. Member checking in qualitative research is used to assure internal discretion and credibility of the participants' responses (Merriam, 2009). I used member checking to ensure the accuracy of the information discussed by the participants during the interview process (Creswell, 2009). Each participant reviewed their answers to the interview questions during the setting for accuracy of my interpretation of their own

data used in the findings. I revised and amended their responses to the interview questions in the draft as required. The information taken from the interview was transcribed immediately, and the data was stored in a locked file cabinet in my home office.

Two participants' data were inconsistent with their voice during the interview and had to be corrected. One of the participants had stated that there was a greater need for other dyslexic students to enroll in the student service center, so they could receive modification or additional accommodations to be successful in school. The typo stated that there was not a great need for the dyslexic students to enroll in the student service center. The misprint with the second participant noted that the time allotted was sufficient, but it should have revealed that the pace of the academic classes was moving at a fast pace which made it hard for the participant to keep up. After the data had been reviewed by the participants, I transcribed the data according to the corrections made by the participants.

According to Merriam (2009), member checking also gives the researcher a chance to check for unintentional bias. Personal bias during member checking was prevented in that I recorded the information exactly as the participants had stated. After the preliminary findings were transcribed, each student was scheduled to meet in a private place in the back of the library for member checking. Participants reviewed their statements that were presented during the interview, and I made any corrections that were necessary.

Discrepant Cases

A discrepant case is a statement that seems to contradict earlier comments made during a conversation (Mackie and Hamilton, 2014). Throughout the interview sessions,

the participants were monitored for discrepant cases. The examples in the previous paragraph could have been discrepant cases, but they were rectified early on. Therefore, there were no discrepant cases to mar the trustworthiness of the study.

If or when a discrepant case is noticed during transcription, the reviewing of data should cease. I would be required to reevaluate the data or contact the participant for clarification. I was vigilant about discrepant cases during data analysis.

Data Analysis Results

I reviewed, transcribed, and secured all data immediately after each interview session. In this case study, triangulation consisted of interviews, observations, questions, research, and pertinent documents to facilitate credibility through cross-checking of the data (Howe, 2012). Direct observation of dyslexic students in the designated area was not used in the study as a source of triangulation; however, the follow up meeting served this purpose. In addition, a professional member of the public school of which I am employed, who is trained in learning disabilities and understands the challenges of students with dyslexia, reviewed the study findings and gave input on the collected, coded, and categorized data. The information received was consistent with research about students with dyslexia. The study did not include discrepant cases, as member checking had been used to verify the data. Therefore, the data collected were considered to be credible and trustworthy.

Merriam (2009) noted that transferability in qualitative research is analogous to how well the results of a study align with other settings. A case study with only 10

participants may not be considered generalizable, as would be a quantitative study using a design with higher constraint, yet the rich and robust information garnered may still provide results that are transferable. Transferability of this case study was addressed through interviews, observations, and hand-coding participants' answers to the research questions according to labels given to each category that are consistent with the results of other qualitative researchers. Likewise, dependability of the results, akin to reliability (Merriam, 2009), was also confirmed. For example, Pirttimaa et al. (2015) found that college students with dyslexia have reading and writing deficits that can be handled using compensatory techniques, similar to the participants of this case study. Nguyen et al., 2013, noted that community college students with learning disabilities effectively used information technology to assist their learning needs. This, too, matched findings within this study.

The results of the study provided valuable insight to the educational needs of dyslexic college students. The information gathered was used to guide the development of an educational program. The results will be shared with dyslexic college students and professional staff who provide academic support and resources to the students.

Interview Demographic Questions

The demographic questions, such as length of time attending college and the participants' majors, were used in this semi-structured interview as ice breakers to assist the students to relax during the interview. According to Merriam (2009), demographic questions refer to the individual age, income, education, number of years on the job, as well

as family members of the individual being interviewed according to the research study.

Table 1 provides a summary of participants' academic majors and length of enrollment in the two-year college.

Table 1

Demographics of Participants

Interviewee	Major	Length of enrollment in school
Participant 1	Technology	1st Semester
Participant 2	Nursing	2nd Semester
Participant 3	Dental Hygiene	3rd Semester
Participant 4	Sociology	1st Semester
Participant 5	Science Teacher	3rd Semester
Participant 6	Social Science	2nd Semester
Participant 7	Nursing	3rd Semester
Participant 8	Psychology	4th Semester
Participant 9	Nursing	3rd Semester
Participant 10	Child Development	2nd Semester

Emergent Themes

Eight themes evolved from the analysis of the interviewees' responses. Four of the themes are specific to *RQ1*, and answer the question: What challenges do current college students with dyslexia experience that can hinder their academic success in college? The four emergent themes for *RQ1* are *accelerated pace*, *poor communication*, *lack of time management*, and *difficulties with concentration/ memorization*. Four of the themes are specific to *RQ2*, and answer the question: What strategies have current college students

with dyslexia implemented to modify or eliminate any impediments to be successful in college? The four emergent themes for *RQ2* are *technical assistance, organizational skills, academic support, and classwork modifications*. The themes that evolved from the interviewees report are listed below.

RQ1: What challenges do current college students with dyslexia experience that can hinder their academic success in college?

Theme 1A: Accelerated pace. Each of the participants stated that their college courses moved at a fast pace which makes it hard for them to keep up, especially with their disability. According to Hollins and Foley (2013), dyslexic students have been identified as slow readers and in need of interventions to assist them with the rigorous academic pace. Knowles (1980) suggested that adult learners should set objectives and motivate themselves to improve their success in the classroom setting.

Ninety percent of the participants revealed that reading, writing, and trying to pronounce or understand high fluency words were their biggest challenges when trying to keep up with the class pace. The participants stated that they would get behind and try to borrow notes or read the handout or the chapters and annotate them. Table 2 includes selected responses to RQ1 that support the theme of accelerated pace.

Table 2

Theme 1A: Accelerated Pace

Theme	Selected participant responses
Theme 1A: Accelerated Pace	<p data-bbox="745 541 1406 688">“I have problems with spelling and writing, and when I try to read it I cannot decipher what I have written; by the time I receive help we are in another section.”</p> <p data-bbox="745 726 1406 793">“I find it hard to keep up with most of my classes because of the fast pace.”</p> <p data-bbox="745 831 1406 978">“I used a spreadsheet to balance my time management. It is not easy to follow so I get behind in class because I like to have fun too, and the classes move at a fast rate.”</p> <p data-bbox="745 1016 1406 1115">“Small group testing is allotted to me, but I find it hard to remember the information because of the fast pace of college courses.”</p> <p data-bbox="745 1152 1406 1220">“By the time I understand one concept in class we are on another chapter.”</p>

The theme of the accelerated pace informed the readers and stakeholders about the challenges that dyslexic students face while attempting to take notes and focus on tasks presented by the instructor. The students struggled to complete assignments and comprehend at the same time. The next theme identifies problems with communications in the college setting.

Theme 2A: Communication. Activities that require speaking affect the dyslexic students’ verbal communication in the class setting; they often struggle to enunciate what they are

thinking or verbalize their thoughts, according to Knowles (1980). Teachers should provide on-going feedback that encourages the learners to voice their opinions in the learning sector. The students with dyslexia may avoid classes that require English language skills because of their lack of communications skills (Fichter et al., 2013).

Fifty percent of the participants stated that communication was a problem for them because they could not explain what they were confused about. Participants 3 and 4 stated that they do not communicate with others in class or participate in class discussions for fear of being ridiculed because they have speech deficiency as well. Many of the students with communication problems said that they do not talk in class or answer questions because of their disability. The dyslexic students revealed that they know what they want to say, but they have problems communicating their responses to others. Table 3 includes selected responses to RQ1 that support the theme of communication.

Table 3

Theme 2A: Communication

Theme	Selected participant responses
Theme 2A: Communication	<p>“I know what I want to say, but the words do not come out right.”</p> <p>“I do not communicate in class because I do not understand the concepts.”</p> <p>“I am nervous in class and I have a hard time expressing myself.”</p> <p>“I tend to stutter a lot. It makes it hard for me to participate in class for fear of being ridiculed.”</p> <p>“Because of my lack of comprehension, I do not participate in class.”</p> <p>“I have always been shy, and it makes it hard for me to participate even when I know the answer.”</p>

Communication for the dyslexic students in college offers several challenges.

Although students are aware of what they want to say in class, sometimes their fears of what their peers might say about their disability require them to maintain silence. They also may have difficulty communicating because of stuttering or loss of words.

Theme 3A: Time management. The majority of the participants who took part in the research stated that they have difficulties with time management. Some have implemented a time management system to assist with managing their study habits. They organized their time management schedule according to their class schedule, a tutorial, or teacher assistance. Students who implemented time management skills in their college classroom

had greater success with remembering assignments and their due dates (Jaggar, 2017; Kibry, Silvester, & Allingham, 2008). Learning good habits and time management for postsecondary students with dyslexia improved their study skills and helped them submit their work on time.

Many dyslexic college students scheduled their classes according to their priority or their tentative graduation plan. A few of the participants revealed that a time management schedule was sometimes complicated to follow because of events they wanted to attend. They would change the study time for that day and return to the prior schedule after the event. The participants stated that they tried not to make it a habit because their main priority was to keep good grades while in school. Table 4 includes selective responses to RQ1 that support the theme of time management.

Table 3

Theme 3A: Time Management

Theme	Selected participant responses
Theme 3A: Time Management	<p data-bbox="768 527 1377 667">“I used a spreadsheet to balance my time management. It is not easy to follow so I do not get behind in class because I like to have fun too, and the classes move at a fast rate.”</p> <p data-bbox="768 705 1377 846">“I try to complete my assignments immediately after class or at the end of the day to keep from forgetting or rushing to finish in order to keep up with the class.”</p> <p data-bbox="768 884 1377 1024">“It is hard to keep up even when a time management chart is implemented because I forget to put assignments on it and later I cannot remember the assignment.”</p> <p data-bbox="768 1062 1377 1129">“I tend to lose my time management chart because I am always misplacing it.”</p> <p data-bbox="768 1167 1377 1234">“I have a time management chart, but I always put things off until a later date.”</p>

Many college students enjoy being a free spirit while away from home, yet this can have dire consequences for a struggling dyslexic student. It is hard enough for an individual with dyslexia to concentrate on the educational tasks presented to them by their instructors, let alone be able to also enjoy socialization with peers. Their academic work often suffers more because of their disability. The next theme identifies the dyslexic students' dialogue about lack of concentration and memorization.

Theme 4A: Concentration and memorization. Most students discussed the challenges of concentration and memorization. Dyslexic students in college may lack concentration and memorization skills which might cause them to not perform well in college (Banai & Ahissor, 2010). Although many dyslexic students enter college with low literacy, researchers hypothesize that students with dyslexia are capable of learning (Kirwan & Leatter, 2011).

Some study participants stated that it was challenging to remember things, especially when the language was difficult to understand. Several of the students stated that when they sought help, they would be drilled about the assignments, and they could not respond to the answer their peers were seeking because they did not fully understand the assignment, which left them feeling dumb. The students tried to study in an area that would be conducive to learning. Most of the participants stated that they studied in the library because it was quiet and the material that might be needed was in the library. Table 5 includes selective responses to RQ1 that support the theme of concentration and memorization.

Table 4

Theme 4A: Concentration and Memorization

Theme	Selected participant responses
Theme 4A: Concentration and Memorization	<p data-bbox="737 527 1373 667">“My major is in the health field and trying to memorize and study for tests make it hard because of my lack of concentration skills and it makes me get behind.”</p> <p data-bbox="737 705 1373 772">“Memorization and concentration are my biggest setbacks.”</p> <p data-bbox="737 810 1373 919">“Reading, notes taking, concentration, and processing information deter me from completing assignments.”</p> <p data-bbox="737 957 1373 1087">“I get angry with myself because I cannot answer a question in class, so I skip class, but before I return to class, I will locate a student in the same class to borrow their notes and Xerox them.”</p> <p data-bbox="737 1125 1373 1199">“Because it is hard for me to focus in class, I cannot participate because I am lost.”</p>

Many students with dyslexia have a difficult time concentrating and memorizing. The least identifying object will cause them to lose concentration, such as peers talking around them, or an object on the floor. In addition, regardless of how long or hard the dyslexic students study, they forget and draw a blank when it is time to present the information, whether it is written or spoken.

The A themes were those that emerged from *RQ1*. These focused on the challenges faced by dyslexic college students. The following B themes emerged from *RQ2*. These are the strategies students used to be successful.

RQ 2: What strategies have current college students with dyslexia implemented to modify or eliminate any impediments to be successful in college?

Theme 1B: Technical assistance. According to Seale (2017), the use of technology in college settings can be beneficial to learning for disabled students, but interventions must be customized to each student with a disability. Students with a learning disability should report to the student service center for additional support while attending college. The teachers at post-secondary educational institutions use various technologies in the classroom to assist students with dyslexia to be successful.

Each of the participants stated that they used the tech lab because it was helpful and that the staff was knowledgeable about dyslexia and other LD conditions. Many students used technical tools such as a smart pen, tape recorders, or a computer to do school work. Others said they often watched videos to help them understand the material. Table 6 includes selective responses to *RQ2* that supports the theme of technical assistance.

Table 5

Theme 1B: Technical Assistance

Theme	Selected participant responses
Theme 1B: Technical Assistance	<p data-bbox="753 527 1179 558">“I use the tech lab or computers.”</p> <p data-bbox="753 600 1308 667">“I use the Surface Pro pen to take notes and record information.”</p> <p data-bbox="753 709 1354 846">“I use a Smart pen to assist me with my studies because it allows me to take notes and retrieve them at a later time to review and ask questions.”</p> <p data-bbox="753 888 1373 989">“I use YouTube for a variety of quick examples, especially in math. It is not easy following along with the presenter.”</p> <p data-bbox="753 1031 1373 1167">“I attend the tutoring sessions and meet with the lab tech to receive help with my studies. The lab technician is knowledgeable about students with disabilities.”</p> <p data-bbox="753 1209 1330 1268">“I use a tape recorder or my phone in class to record lectures.”</p>

Technology is prominent in the world today, and the dyslexic students appear to find it helpful in their studies, especially those who can afford it. Others seek assistance from the student service center for aid with purchasing high technology tools. The next session discusses the dyslexic students’ organizational skills.

Theme 2B: Organizational skills. The participants reported that organization did not come easy for them, yet it was an important tool for their success. Organizational skills should be a prerequisite skill for dyslexic students entering college. Researchers implied

that integrated students who strive to advance in the educational system with organizational skills allow the disabled students to keep important papers and information organized in a binder or folder for future use (Knowles, 1980). Green (2014) stated that the lack of organizational skills affects dyslexic students' ability to decode, encode, and retrieve information that might ensure their academic success in college.

Participants 2, 5, 6, 7, 8, 9, and 10 stated that a balanced work load was helpful because it was less stressful, and it allowed them to take a heavy class and a light class. This meant that the students had time to breathe. Organization was one of their major strengths for P2, 3, 6, 8, and 9 because papers were placed in their binders as soon as the teacher distributed them to the class. P8 stated, "Organization was one of the skills I learned in high school." Table 7 includes selective responses to RQ2 that support the theme of organizational skills.

Table 6

Theme 2B: Organizational Skills

Theme	Selected participant responses
Theme 2B: Organizational Skills	<p data-bbox="764 531 1377 747">“I try hard to keep my materials organized and use my time wisely, but it interferes with my extra-curricular activities which cause me to ignore my responsibilities at school and become further behind. I have to seek help from peers and family members to catch up.”</p> <p data-bbox="764 789 1295 856">“A binder is helpful if time is taken to put everything in the correct divider.”</p> <p data-bbox="764 898 1377 966">“Organization is extremely hard for me because I have not mastered that skill.”</p> <p data-bbox="764 1008 1377 1100">“Sometimes the assignment date is not written down and it causes me to depend on peers for the assignment date.”</p>

Organizational skills are a struggle for most individuals with dyslexia, especially if the person has not been taught to be organized. Organizational skills are lifelong tools used to become successful in everyday tasks as well as in the job market. Sometimes these skills come naturally for many students while others may struggle daily with trying to keep up with important papers. Successful students have learned to file papers immediately. They often write down due dates for assignments on a calendar or in their binders. The next section discusses academic support for the dyslexic college students.

Theme 3B: Academic support. All participants had made appointments to visit with their instructors during the semester, and some of the students found it to be beneficial, whereas

others did not. Many dyslexic students may require additional support from family, friends, peers, as well as their teachers. Support from teachers in the classroom helps to relay information in simple terms to assist the struggling dyslexic students to begin the assignments through the use of peer tutors in the classrooms (Bell & McLeon, 2016).

Seventy percent of the participants stated that they received additional help from teachers frequently, while thirty percent stated that they did not have the time allotted to keep appointments with their teacher because of work schedules or it was not beneficial. The reason given by participants for the meeting with teachers as not being beneficial was lack of information or not being able to give an explanation about the reason they were confused or what they needed assistance with. A few participants said that they have a focus group that meets regularly on campus to discuss concerns and to review assignments and tests. All participants stated that they received support from the student service center, advisors, counselors, and teachers during their conference or special schedule times. Participant 1, 4, 6, 9, and 10 stated that they visited the tech lab regularly because it is very beneficial. The instructors in the tech lab are very knowledgeable about students with disabilities. Table 8 includes selective responses to RQ2 that support the theme of academic support.

Table 7

Theme 3B: Academic Support

Theme	Selected participant responses
Theme 3B: Academic Support	<p data-bbox="727 489 1372 594">“I am given additional time to turn in my assignments and tests which helps me to keep my GPA up.”</p> <p data-bbox="727 632 1372 810">“I attend tutoring to assist with math, and my major course work, but I work after school which makes it hard to attend tutoring or group sessions and I get behind in my assignments and that (tutoring) helps.”</p> <p data-bbox="727 848 1372 953">“I balance my classes with my advisor so that my workload will not be so stressful, and I will be able to continue to maintain a 3.3 GPA.”</p> <p data-bbox="727 991 1372 1062">“I’m enrolled in the student service center and receive help from the staff.”</p> <p data-bbox="727 1100 1372 1241">“Most of my teachers’ activities sheets and tests come from notes taken during class and if you have your notes, you are permitted to use them sometimes.”</p> <p data-bbox="727 1278 1372 1457">“I have used a variety of materials and people to assist me with my assignments such as exchanging notes, attending the technology lab, balancing workload with my advisor, friends, and peers in the classroom.”</p> <p data-bbox="727 1495 1372 1673">“My parents motivate me to study hard and seek assistance at school from counselors, teachers, advisors, and the student service center: They are always reminding me that I am the first generation to attend school.”</p> <p data-bbox="727 1711 1372 1782">“I have friends in most of my classes that assist me with organization, exchanging notes, and tests.”</p>

Although the students with dyslexia are given additional support from the support service center when they apply, they must attend the support services offered to them, or contact their counselors for suggestions or recommendations in order to be successful. When individuals enter college, they are expected to be mature and ready to begin their journey on the postsecondary level. All of the participants agreed that it benefitted them to take advantage of the available resources for their disabilities. The next emergent theme is classwork modifications.

Theme 4B: Classwork Modifications. Seventy percent of the participants revealed that they received additional help and adaptations from their instructors. In some cases, the modifications included study guides or additional time to turn in assignments. Sometimes, students found that sitting near the front of the classroom helped them stay focused during lectures. Others said they were given the opportunity to take a test in a quiet place, so they would not be distracted. The dyslexic students who are enrolled in the student support center are given modifications to be used in their entire classrooms. According to Knowles' theory of andragogy (1980), teachers must choose appropriate learning strategies and offer modifications in order for the students with disabilities to achieve success in the classroom (Hartree, 1984).

The exchange of notes during class or after school was important for P1, 2, 3, 6, and 8. Most students had some form of assistance to keep them in school and off the probation list. Table 9 includes selective responses to RQ2 that support the theme of classwork modifications.

Table 8

Theme 4B: Classwork Modifications

Theme	Selected participant responses
Theme 4B: Classwork Modifications	<p data-bbox="808 541 1252 611">“I can get additional help from my teachers.”</p> <p data-bbox="808 659 1260 728">“I receive additional time to turn in assignments.”</p> <p data-bbox="808 777 1312 846">“I’m given copies of important notes to study for tests.”</p> <p data-bbox="808 894 1265 924">“I like to sit near the front of class.”</p> <p data-bbox="808 972 1349 1041">“I’m given an opportunity for small group testing.”</p>

The students who took advantage of classwork modifications said that these helped them to stay on track with their academics. In some cases, the modifications helped eliminate distractions, so they could concentrate better. Additional time and help were also very advantageous and contributed to their success.

Outcome Summary

The interview questions in this study were aligned with the guiding research questions to provide a better understanding of the academic challenges for struggling dyslexic students, as well as to identify the techniques that other students with dyslexia have used to be academically successful. This qualitative case study used a convenience

sample of 10 dyslexic students currently enrolled in a two-year college located in the southeastern part of the United States. The interviews were conducted in a secluded area of the college library to give the participants privacy and to remain in compliance with the IRB guidelines.

Each of the 10 dyslexic students was presented with 17 semi-structured interview questions. When the participants gave permission to audio tape the interview, it was implemented during the interviews, as well as in field notes. Research question 1 asked: “What challenges do current college students with dyslexia experience that hinder their academic success in college?” Results from participants’ responses revealed that the accelerated pace of college courses, the students’ difficulty with communication, poor time management, and lack of concentration were the main challenges that hindered them from being successful. In order for them to maintain a minimum 3.0 GPA, dyslexic students had to find strategies to help them modify or eliminate their challenges in order to become successful.

Research question 2 asked: “What strategies have current college students with dyslexia implemented to modify or eliminate any impediments to be successful in college?” The data from the participants revealed that they commonly used technical assistance, organizational skills, academic support, and classwork modifications. These strategies used to modify or lessen their challenges had to be implemented to maintain a 3.0 GPA, and the students were constantly seeking other methods to overcome their

deficiencies to remain in college and acquire their degrees. The results of this study can assist struggling dyslexic students to become academically successful.

Dror et al. (2010) found similar results among students with dyslexia. Difficulty memorizing, comprehending written and spoken language and organizing information were common challenges. Recommendations for the use of assistive technology, remediation, and modification of course content were several of the findings in this study. Likewise, Brunswick (2012) found that dyslexic students often apply processes or mechanical assistances to help them to manage their academic barriers. For example, students with dyslexia may implement other means to accomplish a task by recording lectures or asking others for assistance. Participants in this study used smart pens, tape recorders, and mobile phones to capture information that would help them succeed.

According to Gibson and Leinster (2011), students with dyslexia are prone to stress, lack concentration and structural skills, and have inadequate coping skills. Participants in this study identified that their lack of concentration made them forgetful even of filing important papers. Memorizing facts for a test was noted to be a challenge, adding to the pressure of studying.

Fichter et al. (2013) noted that students with dyslexia often avoid language arts and other subjects in college requiring language skills. This makes them at risk of failing core classes. Students in this study mentioned similar experiences, but they took advantage of the technology lab and study groups for additional practice of the skills they were lacking.

Bucci et al. (2013) noted that dyslexic students should be informally questioned about any difficulties they're having in college so that interventions can be established. Instructors can help dyslexic students to identify their deficiencies, strengths, and weaknesses so that they can achieve success. Participants in this study found that if they sought help from teachers and sat in the front of the classroom, they were able to stay better focused to meet their academic goals. Participants also noted that instructors often offered longer completion time for tests or assignments, study guides, and small group sessions. Support from teachers enabled the participants of this study to move forward with their peers.

This study was framed by Knowles' (1980) theory of informal adult education, self-direction, and the teaching of adults. Knowles proposed that adults learn best when their needs are identified, supportive resources are provided, and appropriate learning strategies are implemented (Knowles, 1980). Knowles encouraged learners to set objectives for themselves and motivate themselves to improve as adult learners. Knowles encouraged those who work with adult students to provide a variety of learning opportunities where the students can apply their knowledge. Webster (2016) suggested that teachers should speak slower and provide lecture notes for the dyslexic student. Participants of this study noted that they appreciated the extra help that their instructors provided. The students with the greatest academic success were those who were organized, took advantage of the resources provided, and stayed focused on the required tasks.

Project Deliverable

Based on the results of this study, a workshop and mentoring program was developed to assist first year dyslexic college students. The professional development program for the college students includes meetings to discuss academic issues that are working and those that might need improvement. Students will meet 3 times during the semester; at the beginning of the semester, during the middle of the semester, and at the end of the semester. These meetings will consist of methods to analyze the learning strategies that students have previously used, offer additional approaches, and to discuss concerns of the students with dyslexia.

The mentoring program will be designed to teach students with dyslexia various strategies they may be able to use to achieve academic success. The mentoring program will also partner successful dyslexic upper-class students with dyslexic students entering their first year of college and those who are struggling academically in college. This program will bring about social change by giving the dyslexic students the skills they need to overcome their challenges, assist them to use their voices to remove labels given to them by society, and become self-advocates.

Conclusion

This study was conducted to determine the strategies successful dyslexic students used to lessen or overcome their challenges while attending college. The dyslexic students took charge of their education by locating assistance from peers and enrolling in the student service center for additional support and modification. The successful dyslexic students

took advantage of the resources that were offered at the college, such as the tech lab, tutorials, and peer buddies.

A case study design was used to answer the research questions and to provide the structure that would demonstrate the significance of the findings. Section 3 includes a literature review related to the genre of the project. It provides the key elements necessary for the implementation of a professional development mentoring program for dyslexic post-secondary students.

Section 3: The Project

Introduction

There is no easy solution for the challenges faced by dyslexic students attending college. I believe that the first year of college is a fearsome experience, not only for students with disabilities, but for everyone. The more that disabled students know about what is expected of them, the more relaxed they will be when they begin their first semester (Pino and Martin, 2014). The dyslexic students should become aware of the special accommodations that are available to them and self-enroll in the student service center. It is a college students' responsibility to self-report any disabilities (Kim & Lee, 2016). U.S. colleges do not require that students with dyslexia or other disabilities register with the student service center. When dyslexic students enter college, they should identify the resources available to them, as well as the LD accommodations and the course requirements (Barathi, 2016).

In this section, I describe the project and provide information about the intent of the mentoring program for college students with dyslexia. I elicited eight themes from my case study research. Four of the emergent themes pertained to the challenges of dyslexic students. The other four themes pertained to strategies used by upper-level dyslexic students who have achieved academic success, as noted by their ability to maintain at least a 3.0 GPA.

The project incorporates various goals to assist first-year dyslexic students in being successful. These goals include providing an overview of the barriers or challenges that

dyslexic students might encounter in college, explaining strategies that can assist students in terms of their academic achievement, providing recommendations for academic support, and helping students become more assertive about their needs. The mentoring program will meet at least three times during the first semester to assist dyslexic students with the academic challenges they may encounter.

Rationale

The mentoring program will include a 3-day workshop that will take place throughout the dyslexic students' first semester. An expectation is that the mentoring program will assist students with dyslexia in becoming successful in college. The overall goal of the mentoring program is to improve GPA, as well as to develop reading, management, and organizational skills of students with dyslexia. By implementing specific strategies for learning, the students should be empowered to minimize their challenges to become successful college students.

The program will include a workshop to improve reading, writing, and comprehension skills, as well as help dyslexic students become more vocal. Bjekić, Obradović, and Vučetić (2012) stated that a mentoring program or workshop can assist students with dyslexia by allowing them to become more self-reliant. Through the use of such a mentoring program and workshop, students with dyslexia may become more proactive and seek to discover more about useful technology, hardware, and software offered to them through their student service centers (Sela, 2012). The motto of the Yale Center for Dyslexia & Creativity is “Working the system so it works for you” (Yale Center,

2017). This motto accurately summarizes the focus of the workshop. When dyslexic students enter college in the U. S., they should acquire an understanding of what each teacher expects of students in the class, seek assistance as needed, and make appointments to discuss assignments and other important matters that can assist them to become academically successful.

I selected the mentoring program genre because it seemed to be the best approach for the project given the emergent themes from the research study. In analyzing my data, I found that dyslexic students who do well in college use technical assistance, develop organizational skills, take advantage of academic support, and use modifications available to them. These strategies helped them to cope with the accelerated pace of college courses, communicate more effectively, manage their time, and concentrate on their studies. A mentoring program can be an effective teaching strategy because students can learn from each other.

Mentoring programs often include a workshop for participants to learn skills in an academic environment (Pino & Martin, 2014). In addition, they bring together a person who has achieved success with someone who may be new to the situation (Lawson, Gould, & Conley, 2016). In this case, second-year dyslexic students at the two-year college will advise and guide incoming students with dyslexia. According to Kimball, Friedensen, and Silva (2013), a mentoring program can provide an environment of information and collaboration that gives dyslexic students the confidence they need to voice their opinions in a relaxed, positive atmosphere. This mentor program may reduce stress and anxiety

among participants. The students can be more open with their opinions about issues that need to be addressed without fear of being ridiculed. The project will enable students with dyslexia to implement strategies that will enhance their learning styles, increase their motivation, and implement their own strategies to help overcome their challenges.

Review of the Literature

The review of literature includes scholarly sources generally dated 5 years old or less. The databases used for this project were Sage Journal, ProQuest, and Google Scholar. I also searched Education Resources Information Center's online library and Walden University Library resources. The search terms used were *mentoring, mentoring programs, student mentorship, mentors, best practice mentoring, best practice in education, program planning, curriculum, curriculum programs, professional development (PD), students with disabilities, learning disabilities, dyslexia, adult dyslexia, secondary educator, post-secondary education, learning disabled students in college, strategies and academic support, and centers for students with disabilities.*

Conceptual Framework

In an effort to find a plausible explanation for student attrition, Tinto (1993) theorized that there were two main reasons why students did not succeed in college: experiences prior to going to college and individual characteristics of the student. Tinto asserted that, although students cannot change previous experiences, they can choose to break away from past experiences and become involved in the college setting. Tinto pointed out that the overall effectiveness of college processes, resources, and facilities were

factors that could contribute to the student's success and integration into their new environment. In Tinto's student retention model, academic and social integration are the two major elements determining student attrition or retention (Tinto, 1993). Draper (2008) found that the more involved students are in the academic and social aspects of college, the better the possibility that students will graduate. This total integration in college life is especially important for LD students.

The outcomes of the semi-structured interviews revealed that the students with dyslexia found it difficult to maintain a 3.0 GPA. The student participants mentioned elements at college that made academic achievement challenging: accelerated pace; their lack of expressive communication skills causing them to not participate in class; poor organizational and time management skills; and inadequate memorization and concentration abilities within the larger college environment. Notwithstanding these serious challenges caused by their disabilities, these students did not choose to drop out. Instead, they persevered.

According to literature and the outcomes of the semi-structured interviews, students with dyslexia do not fit in socially due to their inadequacies in expressive and receptive language. Past experiences caused them to prefer not to participate in communication as they found that they could not express themselves adequately, which could easily result in them being ridiculed. The lack of organizational and time management skills also resulted in the student with dyslexia having less time to socialize and, therefore, not participate in typical student activities.

In light of Tinto's model (1993) of student attrition, it seems that students with dyslexia would drop out of college sooner rather than later. Instead, some of them not only stay, but do rather well. Those who remain and work so hard against the odds of their dyslexia inadequacies need all the support they can get. That is the goal of the planned workshop and mentoring program.

Although dyslexic students face many challenges, they can reach their academic goals by having self-awareness, obtaining set goals, and seeking additional help (Pirttimaa, Takala, & Ladonlahti, 2015). I selected Tinto's theory because it revealed strategies that teachers should emphasize while teaching. Because knowledge comes in different shapes, forms, and sizes, there is no set pattern when learning is involved (Schulze, Leigh, Sparks & Spinello, 2016).

Adult learners, including learners with dyslexia, are self-motivated and actively partake in discussions and shared experiences, whether past or present, to enhance their learning. The effectiveness of this project depended highly on the honesty and input of the study participants' responses on the semi-structured interview questions. The workshop and mentoring program were designed to bring awareness about the challenges and fears of dyslexic students while attending college. Therefore, the theory of Tinto (1993) guided this project.

Literature Specific to the Genre

The National Center for Education Statistics (Aud et al., 2012) found that students with specific learning disabilities, such as dyslexia, increasingly enroll at institutions of

higher education. Students with learning disabilities form the largest percentage of all students with disabilities in the United States (Greenfield, Mackey, & Nelson, 2016). Sadly, within this growing number of enrollments, only a small percentage of students with dyslexia graduate from higher education due to the impact of the disabilities on students' learning achievement (Balcazar et al., 2012; Hamblet, 2014). Morris (2014) pointed out that compared to their nondisabled peers, significantly fewer students with learning disabilities complete their college degrees. A large percentage of LD students do not progress past the first year. Nevertheless, students with learning disabilities who do graduate often obtain and keep better job positions compared to their nondisabled peers as they seek long-term working opportunities (Balcazar et al., 2012).

Staying at college and keeping up with their nondisabled peers is a difficult challenge to students with learning disabilities such as dyslexia. Unfortunately, many colleges are reluctant to offer more than the minimum support required by the federal government to these students (Hong, 2015). The institutions for higher education are required by law to provide students with disabilities support services such as peer tutoring, notetaking support, and extra time during exams (Hamblet, 2014). The mentors usually receive training on the disabilities, e.g. dyslexia, but this training is more academic in nature and does not touch on the student's experiences on campus as it relates to the disability. Johnson (2016) conducted research among mentors of nursing students with dyslexia and found that, even with the training provided, the mentors saw dyslexia as

having only a difficulty with spelling. This narrow view of dyslexia may lead to inappropriate support by the mentors.

Although the accommodations represent support that is needed by students with dyslexia, it became clear from this research, and especially from the semi-structured interviews with the 10 students with dyslexia, that this group of students needed varying types of support. Additional resources targeted to individual students would be helpful. The mentoring program and workshop is designed to provide customized assistance to dyslexic students.

Self-efficacy and self-advocacy. Self-efficacy has been identified as a characteristic that enables people to pursue their goals in a self-directed manner. Due to years of struggling and failing in an educational setting, self-efficacy may be lacking in students with dyslexia (Green, 2014). Wernersbach, Crowley, Bates, and Rosenthal (2014) asserted that self-efficacy is a determining factor in student persistence and ultimate success. A mentoring program may be a tool to help struggling students gain confidence.

Although the academic support required by law is beneficial to students with disabilities, these students are individuals with a unique set of needs. Customized support should be targeted to the challenges of LD students (Guy, Cornick, Holt, & Russell, 2015; Hadley & Archer, 2017; Moriña, 2017). Therefore, it stands to reason that additional support should be given to students with dyslexia to address their specific needs.

Results from the semi-structured interviews highlighted the students' need for communication and self-advocating abilities. These self-determination skills are essential

in securing the student's future by enabling them to become actively involved in their education (Hughes, Banks, & Terras, 2013; Vaz, Parsons, Falkmer, Passmore, & Falkmer, 2014). Fortunately, self-determination skills do not exclusively develop from childhood. They can be taught to students with dyslexia, enabling them to take control of their situation and future (Hughes et al., 2013).

According to Wehmeyer and Shogren (2016), self-determination refers to the ability to make choices and decisions for oneself. This ability includes goal-setting and self-awareness. When training mentors to develop self-determination in mentees, the facilitator focuses on introducing questions to develop the ability to evaluate oneself and to display self-knowledge (Wehmeyer & Shogren, 2016). While introducing and practicing this skill on one another, the mentor develops self-knowledge and self-advocacy skills. In addition, mentor training consists of creating awareness that the mentor should allow the mentee to make his or her own decisions, choices, and solutions to problems. In facilitating these skills and practicing it on one another, the mentor learns how to perform these actions (Karcher, 2007). This process helps the mentor develop a personal set of self-determination skills.

Self-advocacy is the ability to express one's needs and pertinently ask for assistance (Gregg, Wolfe, Jones, Todd, Moon, & Langston, 2016). Mentors reported improvement in their own abilities to describe their needs and ask for specific kinds of assistance following mentoring other students with dyslexia. The mentor's ability to describe dyslexia to fellow students and to verbalize their own needs can lead to the mentors gaining self-advocacy

skills (Karcher, 2007). By teaching the mentors to describe their own needs and to summarize the information provided by the dyslexic mentee, mentors learn how to structure their own thoughts on dyslexia and to communicate it concisely (Gregg, et al., 2016; Karcher, 2007).

Socialization and communication. The results of the semi-structured interviews indicated that the students with dyslexia were hesitant to mix socially with other students or to participate in classroom discussions due to their difficulties with encoding and decoding communication. Apart from the two students who indicated that they have a speech impediment, the other eight students remarked about their difficulties pronouncing multisyllabic words. The pressing communicative inability on the one hand, and the need to be heard on the other, makes classroom and social interaction difficult for students with dyslexia (Gregg, et al., 2016; LoGiudice, 2008).

Strange and Banning (2001) postulated that the college environment is an ecological system that is shaped by and shapes the students. This interaction between the student corps, individual students, and the campus environment can only be reciprocal when individual students become involved in the new campus community. The findings of the current study confirmed Hong's (2015) research which suggested that the emotional and physical demands of college life are overwhelming to students with learning disabilities. This necessitates extra support from family and friends who may not always be able and/or willing to be involved to such an extent. In their study on the social ties that support students with disabilities throughout college, Lombardi, Murray, and Kowitt (2016)

and Pino and Mortari (2014) found that, in many cases, these students could not survive college were it not for the social support they received.

Hong (2015) indicated that students do not always find the necessary support from student support services. This finding was confirmed by McPheat (2014) who asserted that students with dyslexia did not self-disclose out of fear of being ridiculed or treated differently. Furthermore, being identified as someone with special needs tends to elicit a chain reaction of biases and preconceived ideas from the lecturers. With the high level of demands on their emotional and intellectual energy, the students do not wish to complicate their lives further by reporting at student support services that inevitably led to being treated differently, stigmatized, and feeling intimidated (Hong, 2015; Moraña, 2017). Such circumstances caused a decrease of self-esteem and confidence which, in turn, impacted the stress levels and academic achievement of students with learning disabilities.

Abreu, Hillier, Frye, and Goldstein (2017) found that students with disabilities who visited the student support services achieved a higher GPA compared to their peers. The impact of the way that society reacts to a person with disabilities such as dyslexia is a direct result of how a specific society views normalcy (Brown and Broido, 2015). The reaction of society on the disability can lead to an exaggerated effect of the disability in that specific situation. Brown and Broido (2015) further suggested that the students with disabilities should be allowed to participate in discussions regarding accommodations for them.

MacCullagh, Bosanquet, and Badcock (2017) and Yssel, Pak, and Beilke (2016), included students' feedback in their research and confirmed that student support services

provided a valuable service. They emphasized that the students with dyslexia had to learn coping skills due to their unique needs. The current study also involved students with dyslexia in semi-structured interviews, and the data provided valuable information regarding the personal struggles and coping mechanisms of students with dyslexia (Kimball, Moore, Vaccaro, Troiano, & Newton, 2016).

The results of the interviews of 10 dyslexic students attending college in the southeastern part of the United States revealed a need for a mentoring program such as the workshop developed in this project study. According to Kimball, Friedensen, and Silva (2013), students with disabilities revealed their problems, whether positive or negative, through engagement with others. Therefore, a workshop can provide an environment of information and collaboration that will give students with dyslexia the confidence to voice their opinions in a relaxed and positive atmosphere without fear of being ridiculed. Such a situation will reduce stress and anxiety and allow the students to be more open with their opinions on issues that need to be addressed.

Mentorship programs. Dyslexia is slowly being recognized as a hidden disability (Sutton & Shields, 2016). Post-secondary schools should become proactive to ensure that dyslexic students can access and participate in education at the same level as their peers (Castle, Wheldall & Nayton, 2014). Mentoring programs are effective interventions for dyslexic students because they allow the students to generate their own goals as well as implement shared goals between the novice dyslexic students and their dyslexic mentors (Wallace, 2017). Flink (2017), the founder and CEO of Eye to Eye, an advocacy and

mentoring system by students with dyslexia for students with dyslexia, stated that not only do the mentees benefit by the program, but mentors indicated that they can communicate better and are more able to speak up for themselves.

Anastopoulos and King (2015) stated that a mentoring program should increase the expressive well-being of students with disabilities, provide knowledge about campus resources, increase organizational skills, as well as reduce their maladaptive thinking. Kimball, Wells, Ostiguy, Manly, and Lauterback (2016) were in agreement with the previous researchers when they stated that a mentorship program helps the dyslexic students in college to establish patterns or standards for success. Mentoring programs for students with disabilities increase the decoding skills of students and assist with minimizing overload by relying on the students' strengths and learning styles. Brier, Markman, Pernice-Suca (2016) noted that a mentor program, combined with achievement strategies, may increase self-efficiency and success, while reducing dropout rate. This goes hand in hand with Tinto's belief that academic and social integration will assist students to gain the skills that will help them stay in school.

Packard (2012) suggested that a successful mentor program should begin with 1st year college students, especially for first-generation students. Given the feedback from the semi-structured interviews, addressing the dyslexic students' challenges early on in the college program will provide them the resources they need to be academically successful. In addition, the 1st year student will have the added benefit of a mentor to lead him or her through day to day difficulties.

Project Description

The workshop/mentoring project is aimed to support students with dyslexia at the college level to improve and maintain at least a 3.0 GPA. The workshop is not intended to replace any support provided by the college to students with dyslexia, but rather to augment this support by providing in-depth knowledge and practical skills to support the students with dyslexia. As with any training activity, the workshop would require student time, scheduling of the three-day workshop at the college, and support from college administration and lecturers. The detailed project deliverable is in Appendix A.

Resources, Supports, Barriers, and Potential Solutions to Barriers

Time, instructional space such as a lecture room or hall, and support from college administrators are needed to execute the workshop. The 3 days needed for the workshop might be an issue. The students need to focus on the workshop for the required 3 days. This entails finding a 3-day time slot where all the participating students with dyslexia are free to attend the workshop. It might be necessary to utilize the first 3 days of a holiday, over a long weekend, or 6 evening sessions.

Learning space at the college for the workshop would be perfect, if this is possible. Alternatively, any quiet room or space at the library could be utilized. Aside from participating in the workshop, there would be no formal expectations of the students with dyslexia.

Materials for the workshop. The facilitator guide will include exercises, activities, and notes to supplement each aspect of the workshop presentation. Power point slides with

bullet points, topics for discussion, and key elements from the different sections of the workshop would also be included. Student materials would be kept to the minimum as students with dyslexia often use their own manner of note taking, and one of the objectives of the workshop is to encourage and practice note taking. However, a workbook with some writing prompts, as well as space for joint activities and providing input during discussions with fellow students will be provided to the participating students.

Organization was one of their major strengths for P2, 3, 6, 8, and 9 because papers were placed in their binders as soon as the teacher distributed them to the class. P8 stated, "Organization was one of the skills I learned in high school." Sixty percent of the participants voiced that annotation was one of their strengths. P2 said, "It is a lot of trouble, but that is the only way I can remember what I am reading." Eighty percent of the participants said that they used peers and friends to assist them with assignments. The exchange of notes during class or after school was important for P1, 2, 3, 6, and 8.

Most students had some form of assistance to keep them in school and off the probation list. A manual consisting of some guidelines and notes will be developed, duplicated, and bound for the mentors' use. Other materials consist of flip board paper and flip board pens. Given the time-frame of the program, medium pizzas for each participant and the mentors would be needed.

Existing supports and resources. Space is available at the college to run the 3-day workshop, as well as a 6-session evening option if that would be preferable to participants. Additionally, the staffs at the student support center are committed to helping students with

diagnosed disabilities. They have the training and desire to provide opportunities for student support.

It is important to allocate instruction in a relaxed, friendly atmosphere as the students with dyslexia need time to assimilate new information, and interpersonal communication needs to be facilitated. The college has classrooms that could be used as a seminar room with moveable desks that can be positioned in a semi-circle for discussions. The library has tables for small group work. The information technology (IT) department is well equipped to assist with any difficulties in showing the videos. The IT department must be informed of the planned video showing to set up the equipment and provide technical support.

Barriers and potential solutions to barriers. Getting students to give up 3 consecutive free days in a row for a workshop might be a challenge. Alternatively, the workshop could be run over 3 weekends where a Saturday is used or 6 evening sessions. This could be achieved by breaking down the workshop into smaller chunks that are spread out in time-manageable modules.

Finding other successful dyslexic 2nd year students who are willing to serve as a mentor may also be difficult. The students who participated in the semi-structured interviews are deemed to be a good starting point as they already were comfortable with sharing strategies to help other students with dyslexia. If not enough student facilitators are recruited in this manner, a snowball technique will be used so that the student mentors' friends could be targeted next.

Implementing the workshop could face a substantial barrier. The students with dyslexia have learned not to disclose their status and do not easily trust people from outside. Enough time is needed to build trusting relationships between the students and with the facilitator. However, there is only a 3-day period allocated for the workshop; time is therefore limited. An open and trusting atmosphere is needed to get the students to discuss their challenges and coping strategies.

Project Implementation

The workshop will be run during 3 days in the fall semester of the college year. School holidays may be a good option. If not, evening or weekend sessions will be held.

The workshop will give the students with dyslexia an opportunity to gain more insight into dyslexia. The students can develop and practice different coping strategies. They can also work on their communication skills during joint activities.

Project timetable. Thorough planning is essential to the success of any program. Prior to implementation, the program director, presenters, and student facilitators will meet to strategize and organize all elements of the program. The facilitator should keep in mind the cost of materials. This includes buying stationary such as whiteboard pens, note books for the students, printing and binding the facilitator manuals, evaluation sheets, and pizzas for the meetings.

The first objective in presenting the workshop is to arrange for the same venue for the duration of the workshop to avoid any misunderstandings. After a preliminary meeting with the mentors and workshop participants to arrange dates and times, the presenter must

arrange the location of the workshop. This has to be done well in advance to ensure that the venue is secured. The facilitator should also determine how the venue could be adapted to suit the purposes of the workshop. Table 9 provides a timetable for each task that must be completed for a smooth implementation of the project.

Table 9

Project Study Timetable

Task	Time	Stakeholder
Develop objectives, determine content, and schedule room	8 weeks prior	Facilitator Student mentors
Copy instructional materials and obtain supplies	6 weeks prior	Facilitator
Implementation	8 hours/3 days Alternatively: 6 sessions of 4 hours each	Facilitator Student mentors Student participants IT services
Evaluation- Formative	At the end of each day	Facilitator Student mentors Student participants
Evaluation- Summative	At the end of the workshop End of year GPA	Facilitator Student mentors Student participants

Information technology services (IT) must be informed of the workshop and videos that will be presented so that any issues could be addressed. Doing this activity 6 weeks before the actual workshop gives the facilitator ample time to address any potential problems. This is also the time during which the financial aspects should be finalized. The mentor manual should be duplicated and bound, and an assistant can duplicate evaluation pages. The facilitator can buy note books for participants, procure flip chart pens, and flip charts, and arrange for pizzas to be delivered an hour before the close of the workshop.

Roles and Responsibilities. Each person involved with the workshop aspect of the mentoring program will have a clearly defined role with associated responsibilities. The program planner will lead all of the planning meetings and direct the activities designed to support the program. The facilitator will serve as the core instructor for each day of the program, though additional speakers may present special topics. The students and mentors will be required to attend each day of the program. The mentors will be given an incentive gift for their participation, such as a Starbucks voucher.

There will not be any formal responsibilities that the students with dyslexia are required to fulfill. The most important aspect of the workshop is that the students should spontaneously participate and openly share their experiences, needs, and coping strategies. Furthermore, there should be a willingness to break the usual routine and venture into the unknown to learn new skills such as communicating with strangers and trying out different activities.

The students need to free up 3 days in their holiday or long weekend to allocate time for this workshop. This could pose a problem for some students. Alternatively, 6 evening sessions could be scheduled between 5:30 and 9:30 p.m. to fit in the workshop. These meetings could be scheduled every 2nd week so that the students' academic and personal time would not be impacted. The time should be completely dedicated to the workshop, as interruptions would break the individual student's and group concentration. As the program planner, I must ensure that the workshop is practical and deliverable. In addition, I have to choose activities and incentives in such a way that the students with dyslexia are compelled to attend the 3-day or 6-sessions workshop.

Project Evaluation Plan

Planning of any training, including workshops, must include evaluation. The project study was aimed at offering actual benefits for students with dyslexia by providing them with insight about their LD and developing coping strategies. The best evaluation would be analysis of their semester or year-end results at the college, as suggested by Hill, Besiege, and Jacob (2013). Another way of evaluating the workshop is to elicit feedback from the participating students with dyslexia via open-ended questions (Higgins, 2017). Comments from participants will help to strengthen the program.

I will start this workshop project with a clear purpose in mind (Guskey, 2002; Guskey, 2014) A major goal of the program is to equip dyslexic students with the necessary insight into dyslexia and skills to cope at postsecondary institutions. Formative

and summative evaluations will be used during the program to ensure that this purpose is consistently fulfilled.

Types of Evaluation

The areas identified for feedback include formal knowledge of dyslexia so that the students with dyslexia can explain their situation to others and have more insight in their own problems. It's also important to determine if the students are able to put the coping strategies to work by taking notes, explaining something to the group or peers, or collaborating and communicating with the group members. Finally, I will elicit feedback on how well the workshop fit the students' expectations and solicit suggestions for change that could be used in future workshops.

Some of the evaluation would best be done formatively while the students are participating, e.g. communication skills, and application of new coping skills. The participating students with dyslexia could alternatively complete a self-evaluation before and after the workshop to allow for comparison of the strategies they use and would consider successful. Formative assessment could also assist the facilitator by indicating if the venue is comfortable and if the session met the participants' needs.

Developing a workshop implies that the facilitator allocates time and organization to provide training where students will receive accurate information and learn coping skills that they could implement in class and other areas of their lives. According to Guskey (2014), the planning of workshops must be done with the end in mind; therefore, by asking what the students with dyslexia should be doing differently or what gains were envisioned

by attending the workshop should guide the workshop design. The summative evaluation will focus on receiving information on the goals of the workshop to determine to what degree the workshop achieved those goals.

Open-ended questionnaires will be used after the workshop to obtain more input from the participants. The summative evaluation will focus on (a) whether the participants perceived the workshop and their participation as sufficient, (b) whether the participants perceived the impact and future use of the workshop as high, medium or low, (c) what changes (positive or negative) the participants expected in their academic achievement and general life following the implementation of the workshop practices, and (d) the applicability of the workshop contents to facilitate more in-depth insight in dyslexia (Guskey, 2002; Guskey, 2014). Feedback on each of the four aspects will assist the program planner and facilitator in making improvements to the program (See Appendix A for the summative evaluation form).

The intended outcome of the workshop is that the participants will be empowered to speak up for themselves regarding their needs and to achieve better grades at their college. Furthermore, I am conducting an evaluation at the end of the workshop in order to allow for enough practice and interaction to take place during the workshop. This summative evaluation will consist of an open-ended questionnaire that will focus on the information and practical tools provided and developed during the workshop.

Justification for Types of Evaluation

Guskey (2002) identified five levels of participant evaluation, three of which involve the perceptions of participants': (a) reactions, (b) learning, and (c) use of new knowledge and skills (p. 46-48). Guskey (2002) also suggested a variety of instruments to obtain feedback from the participants for evaluation purposes, such as questionnaires focusing on new information and/or skills that were introduced during the workshops. Guskey (2014) used questionnaires directly after the workshop, as well as having the students demonstrates the new skills that were introduced during the workshop. Overall, participation in the training should result in the participants feeling more confident about coping in academic classrooms.

At the end of the workshops, the participants will be given a summative assessment consisting of five questions to be filled out and submitted immediately after the session ends. The summative assessment will enlighten me about the participants' needs, thoughts, and information that needed clarification. Since this project is aimed at increasing the participants' knowledge and providing new coping strategies, it is imperative that the project meets the needs of the stakeholders.

Project Implications

After collecting and analyzing data from the qualitative study, I found that the dyslexic students felt that the mission or goals they had set for themselves were realistic, but difficult. Each participant had many strategies that they used to equip themselves for success while attending college and beyond. The participants were excited to be a part of

the study. Many stated that the interview situation was beneficial for the dyslexic student, as well as for struggling students. They wanted a summary of the research study. In fact, a few of the students stated that they would like to participate in a workshop and mentoring program if one would be offered.

Social change will occur as a result of helping dyslexic college students understand their disability. Mentors will demonstrate the strategies they use that will enable them to graduate from college to become productive members of an educated workforce. The mentoring program and workshop will show that dyslexia is a complex disability, but there are tools and resources to be used that can minimize the challenges of obtaining a higher education degree. The mentoring program will help remove barriers that hinder the students with dyslexia from being academically successful.

In Section 4, I share my reflections regarding the development of the mentoring program and workshop. I also discuss the strengths and limitations of the project. Finally, I communicate what I have learned through the process of research and scholarship as I completed my doctoral journey.

Section 4: Reflections and Conclusion

Introduction

I designed this study to determine what difficulties are faced by dyslexic college students and what strategies have helped other students with dyslexia to become academically successful in college. Based on the results of semi-structured interviews I conducted with the participants of the research study, I developed a 3-day workshop and mentoring program. The fall semester workshop will be offered to incoming college students who have registered with the student services center with a diagnosis of dyslexia. Current upper level dyslexic students who have achieved at least a 3.0 GPA and who have volunteered to serve as a mentor will be assigned as guide and support through the academic year. In this section, I will discuss the program's strengths and weaknesses, in addition to reflecting on what I have learned about myself through the doctoral process.

Project Strengths and Limitations

Project Strengths

I drew from the results of the qualitative research I conducted with achieving dyslexic students to determine the genre of the project. Along with the theoretical framework, I used recommendations offered in the literature to develop the workshop in order to gain in-depth insight about the needs, challenges, and coping strategies of college students with dyslexia. I incorporated information provided by the student participants in developing the project, thus benefitting from their varied perspectives and experiences. The strengths of this workshop lie in the combination of theoretical insights about dyslexia

(Fostick et al., 2012; Friend & Olson, 2010; Gregg et al., 2016; Tops et al., 2013; Verthoeven et al., 2010) with the educational practices of achieving students with dyslexia. Analyzing the lived experiences of these students provided me with insight about the real-life issues that students with dyslexia have to cope with on a daily basis, and that the participants of the workshop also may experience.

I used Tinto's (1993) theory of student retention to guide this project and direct the development of the workshop. As the program took shape, I specifically targeted two elements of Tinto's theory academic and social integration of students with dyslexia. This focus of the workshop generated an emphasis on student interaction as they learned how to overcome difficult challenges such as time management or note-taking. Greg et al. (2016) and LoGiudice (2008) identified that peer interaction may be limited in academic situations among LD students; therefore, I chose to use small groups of participants for the workshop. Allocating ample time for discussions and sharing of ideas to promote networking and relationship building while practicing communication skills may benefit first year dyslexic college students.

One of the outcomes of the qualitative research I conducted was that students with dyslexia find it difficult to voice their opinions or ask for assistance due to the communication difficulties associated with dyslexia. I designed the workshop to provide student participants the opportunity to discover and communicate their personal challenges in what I believe will be an accepting and safe environment. Participants will have

opportunities to ask questions, request assistance from the mentors, and formulate conclusions in small group activities.

The themes detailed in the outcomes from the qualitative research study that I conducted were clear and specific, and resonated with findings of researchers in the field of dyslexia (Shaul, 2012). Using these themes as workshop components contributed to the effectiveness of the workshop because it provided a starting point for discussions about real issues that students with dyslexia experience. The workshop structure will afford ample opportunities for self-reflection and active learning together with group discussions in order to facilitate the participants' ability to express their thoughts in an open forum.

Another project strength is that the workshop will offer dyslexic students the opportunity to create and practice coping strategies. Participants will discover which strategies are more beneficial to them personally as they cope with the demands of the academic and social life at college. Also, providing the workshop throughout the fall semester will enable timely solutions to struggling dyslexic students.

Project Limitations

There are several potential limitations of this project. The first problem will be to get students to participate in the program. I know that some students do not feel comfortable disclosing that they have dyslexia. Others may not realize that the fast-pace of college will be daunting for a first- year LD student. I will need to rely on the student service center staff to assist in recruiting students for the program.

Another limitation is that the workshop is a 3-day program. This time frame could be a problem for students and educators. They might like to attend the workshop but may be unable to do so due to the length of the program or circumstances beyond their control. Furthermore, the workshop may impose hardship on those students who are working different shifts. Therefore, alternative configurations may include a six-session evening program, which I will offer as an option if enrollment warrants it.

Recommendations for Alternative Approaches

Rather than developing a 3-three-day workshop and mentoring program, I could have written a position paper. The white paper would highlight the challenges of dyslexic students and include the resources needed to be put in place to benefit the academic success of students with this disability. A position paper might have been beneficial if I were trying to make a case to administration regarding the needs of the student services center; however, doing so was not my goal. Rather, I wanted to reach out specifically to the students who are struggling and provide tangible assistance to help them be successful in college.

Alternatively, I could have addressed the local problem by offering a faculty-development program to professors at the college. This program could have included classroom observations to practically assess how students with dyslexia manage the academic curriculum. Additionally, I could have developed an online self-assessment tool following the initial qualitative research project. Such an instrument might be useful to determine how many students with dyslexia experience similar or the same challenges.

Staff members of the student services center might be better able to prioritize the needs of students with dyslexia and to develop support programs within the college to assist these students. I made the decision in favor of the three-day workshop and mentoring program due to the results of the interviews I conducted. Students with dyslexia who participated in the study indicated that they lacked the ability to formulate questions during class, needed organizational skills, and wanted guidance to help them do well in their courses. I believe that such needs are best addressed in an interpersonal, face to face situation.

Scholarship, Project Development and Evaluation, and Leadership and Change Scholarship

Effective practice in the scholarship of teaching and learning (SoTL) necessitates “focused, critical inquiry into a well-defined aspect of student learning” (Felten, 2013, p. 122). This study about the learning and coping practices of students with dyslexia is embedded in SoTL. Felten (2013) stated that while partnering with the student(s), SoTL should include research that is grounded in context and carried out in a methodologically sound manner. Through this project study, I participated in the SoTL by focusing on the lived experiences of college students with dyslexia. I designed and conducted a scholarly study with a view to improve learning outcomes for college students who struggle academically because of their handicap. Throughout this scholarship experience; I learned the value of sustained focus and collaboration to produce quality research. Each milestone in the doctoral program represented hours of focused work and revisions that required patience Participation in this academic learning process increased my knowledge, skills,

and abilities to conduct research and enhanced my ability to write in a more scholarly manner.

In developing this project, I was afforded the opportunity to advance my skills as researcher. My ability to locate literature on the topic, read scholarly articles, and integrate related research increased significantly. By signing up for Google Scholar alerts, I was able to stay informed of recent articles on my topic. As the world of scholarly databases, conducting interviews, and data analysis techniques unfolded, I gained a better grasp on conducting research. My studies have empowered me with new knowledge. The insights I gained from my scholarly experience will enable me to positively impact the community that I serve.

Project Development and Evaluation

Effective management of projects has received increasing attention from different sectors around the globe, as good project management has been correlated to project success (Carvalho, Patah, & de Souza Bido, 2015). Developing and managing a project centers on accurate planning, attention to detail, anticipating changes and delays, cooperation, and perseverance. Conducting and managing doctoral research is no different. The ability to clearly define the local problem and structure the research program is crucial to successful completion of the study project.

Collaboration with various university, stakeholders, and committee members is essential to arrive at a definition of the local problem and research approach. Collaboration was one of the mainstays of this research process as it was needed at various stages and

involved different stakeholders at the university. This cooperation included administrators who assisted with access to the study site, university committee members, student participants, and different reviewers.

Throughout the various stages of the doctoral process I honed my skills as a project developer and evaluator. Furthermore, the practice of having numerous revisions enabled me to become aware of different issues pertinent to my project which improved my reading, writing, and comprehension. Understanding issues and taking appropriate action began as chaos, but eventually I began to see the big picture.

The Walden IRB process increased my awareness about ethical issues and the importance of protecting the participants' privacy. Research studies must also be designed to mitigate potential risks to any person who has agreed to participate. The different stages of the doctoral process, including ethical approval, sharpened my ability to act in a professional, transparent manner.

Leadership and Change

I have always regarded myself as a leader. This project study sharpened my leadership and managerial abilities in several ways. The most important learning curve was to anticipate possible challenges within my own work and setbacks in receiving help and feedback. Throughout the process I improved my organizational skills, which I believed were adequate, but realized that completing a doctoral project required more structure than was typical. Accuracy and attention to detail required by research at this level was critical to completing the study successfully and receiving approval from the different committee

members. I had to synchronize the required approvals to conduct the research and manage data collection with students from various departments which led to several adjustments in my initial timeframes and planning of events.

Managing change is an ongoing process and I had to adapt to the needs and styles of the students with dyslexia to facilitate change in the way they coped at college. As a practitioner, I have come to realize that through planning and a structured approach, which allows room for flexibility, I can do anything I set my mind to. I trust that this doctoral journey and achieving the professional degree will help me to attain the goals that I have for my future career in higher education where I aim to serve the students with disabilities. The insights I have gained from this experience will continue to guide and frame my leadership abilities.

Reflection on the Importance of the work

The importance of this research project was centered on my involvement with struggling students with dyslexia, empowering them to take control of their own situation. By increasing these students' knowledge of dyslexia and helping them network with achieving dyslexic students, I found great satisfaction. My role as an educator is enhanced by enabling the students to develop and practice effective coping skills, so that they can develop self-efficacy and improve their academic achievement.

Not only do I believe that the project study provided insights into the challenges faced by dyslexic college students, I also learned that my professional responsibilities extend beyond the classroom. Developing programs, guiding struggling learners, and

creating appropriate interventions have great significance. For example, the workshop I have fashioned will also benefit the student mentors. Karcher (2007) showed that students with disabilities' self-determination and self-advocacy skills improved while mentoring peers. It is foreseen that the student mentors could become advocates for persons with dyslexia, not only at college level but also within their careers. The goal of the workshop is to increase the academic achievement of the struggling dyslexic college. It will also improve the student's self-determination and self-advocacy so that students with dyslexia will be able to voice their needs and ask for specific assistance. Self-efficacy is something that that some students may lack.

Implications, Applications, and Directions for Future Research

The project study can lead to positive social change on an individual level, and the increased awareness raised due to the project has the potential to impact organizational processes. This workshop for struggling dyslexic students, utilizing the insights and mentorship of achieving students with dyslexia, will be very beneficial for the participating college. Through my endeavors, I raised awareness of the plight of students with dyslexia with all the stakeholders that I had to negotiate with in conducting the qualitative research. I informed administrators and lecturers from various schools and departments of my professional insights and stimulated discussion on the needs of students with dyslexia. The individual students with dyslexia, both achieving and struggling, benefitted from this research project by gaining additional insights and skills enabling them to self-manage and become advocates for persons with dyslexia.

The research findings were restricted to qualitative research at one particular two-year college. These findings could be complemented with quantitative findings from a larger sample across the United States that might reveal other themes not uncovered during this research. Such quantitative findings could be integrated with the qualitative finding of this current study to develop a more comprehensive intervention model for use at other institutions for higher education.

Future research could explore the effectiveness of the workshop in other settings such as the local community, universities, or high schools to determine the applicability in different situations. When presenting the workshop, the stakeholders will be engaged in suggesting mitigatory measures and ways to assist students with dyslexia in a variety of academic educational situations. Future researchers may want to explore these suggestions to determine the degree of effectiveness in the subject/discipline it was suggested, as well as its generalizability to other similar situations. Lastly, researchers may be interested in examining the success of the workshop over a longer period to determine whether it led to increased awareness and changed the academic success of students with dyslexia.

Conclusion

In theory, all dyslexic students should be accepted by society as having a disability. It is imperative that stakeholders become aware of the importance of an education for all, including LD students, as they must function in society. Students with dyslexia who enter postsecondary education are often faced with unexpected barriers and difficulties. Due to their lack of appropriate communication skills they are often at a loss to explain to others

what their specific needs are and they also are afraid of being ridiculed. This leads them to refrain from seeking assistance from the student support centers, teachers, and administration to obtain accommodations for their disability.

Some students with dyslexia drop out of college at an early stage; however, there are many who complete their courses and graduate in good standing. This study focused on learning from successful students with dyslexia to develop a workshop for those students with dyslexia who struggle to manage at college. I hope that this workshop will prove to be successful in assisting the participants to achieve better grades academically, and that the coping skills they learn will serve them in later life as well. This research project will enlighten stakeholders and other researchers to take a closer look at students with dyslexia. They can begin to formulate changes to assist these students to become all they can be, encourage them to never give up, and remind them to always keep learning.

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Appendix A: The Project

After day 3 of this project, the participants will acquire a working knowledge about dyslexia, the challenges of the dyslexic students, and the support system for students with dyslexia. The data collected in planning for this workshop revealed that there is a need for further resources and mentoring of college students with dyslexia. The workshop may enlighten the stakeholders about dyslexia and the barriers the dyslexic students face in the college in the U.S.

Workshop and Professional Development Details

This project is designed to help stakeholders acquire a better understanding about dyslexia and provide information about resources available for college students with dyslexia. The goals of the workshop include an overview of the barriers or challenges the dyslexic students might encounter in college, explaining strategies that can assist their academic achievement, providing recommendations for academic support, and helping students become more assertive about their needs.

The participants will be shown several films about dyslexia and the learning challenges that arise from the disability. The participants will be introduced to the ten things that dyslexic students want to know and how those who work in the higher education sector can assist dyslexic students.

Note: Should the 6-session evening option be selected by the students, the three suggested day sessions will be divided into six. Effectively this means that the sessions will

run from the morning until lunch for session 1; lunch until end-of-day for session 2, and so forth.

Agenda for the Workshop for College Students with Dyslexia

Day one

What is dyslexia? How does it impact on learning and life?
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8:00-8:45 Arrival and sign-in – meet and greet

Ice-breaker: Write name, affiliation, and one favorite activity on a piece of paper, roll it in a ball and throw it away from you. All participants pick up a paper ball and read the information on it, thereby introducing each participant to the group.

8:45-9:30 Opening remarks/goals

Participants get an opportunity to share their expectations for the workshop. The facilitators write the expectations on a flip chart and post it on the wall for future checking.

9:30-10:00 PowerPoint Presentation#1- Study findings and discussion

10:00-10:30 Break

10:30-11:30 Video clip – Living with dyslexia

<https://www.youtube.com/watch?v=39ASZo1yDq8>

Discuss contributing what you see when reading. How does this impact on your learning?

11:30-11:45 Comfort break

11:45-12:45 Video clip - Dispelling myths of dyslexia

<https://www.youtube.com/watch?v=nZirlcaDrdU>

Discuss concepts surrounding dyslexia, e.g. hereditary, lifelong condition, etc.

12:45-1:15 Lunch

1:15-2:00 Small Group Discussion: What do I struggle with? What am I doing to help myself?

2:00-3:00 Dyslexic persons who are doing well – mentors introduce themselves

3:00-3:15 Tea break

3:15-3:45 Video clip - True gifts of dyslexia –

https://www.youtube.com/watch?v=_dPyzFFcG7A

What are my dyslexic gifts?

3:45-4:00 Reflection and completion of formative evaluation

<p>Day Two: Reading and Writing Working the system so it works for you</p>
--

8:30-9:00 Welcome and group arrangements for day two, feedback on Day One

(previous two sessions)

9:00-9:45 Anecdote sharing from mentors – what do I see before me? (Reading skills)

9:45-10:45 Small group discussion and report back. Discuss contributing factors of reading challenges and what strategies work. Participants are asked to sit at the table labeled with their study topic to form interest groups for the day. Participants will be instructed to decide among themselves who will take notes of the discussion and who will do the feedback to the larger group.

10:45-11:10 Tea Break

11:10-12:00 Reading practice—use the solutions suggested by the larger group

12:00-12:30 PowerPoint Presentation #2 – Test and exam questions. Presenter provides insights pertaining to the ways questions are asked and how to decide what to answer. (<http://library.bcu.ac.uk/learner/writingguides/1.11.htm>)

12:30-1:45 Lunch

1:45-2:45 Study a subject related exam paper, decide what is asked and note ideas to answer the question. Work in groups of two or three.

2:45-3:00 Break

3:00-3:30 Planning writing? You just did!

Essay exam tips: <http://www.lifehack.org/articles/communication/7-tips-for-writing-exam-essays.html>

3:30-4:00 Reflections and completion of formative evaluation

<p>Day Three Notes, Technology and Time management</p>
--

8:30-9:00 Welcome and group arrangements for day three, feedback on day two

(last session)

9:00-9:45 Anecdote sharing from mentors – Take Notes!

9:45-10:45 Small group discussion and report back. Discuss contributing factors of reading challenges and what strategies work. Participants are asked to sit at the table labeled with their study topic to form interest groups for the day. Participants will be instructed to decide among themselves who will take notes of the discussion and who will do the feedback to the larger group.

10:45-11:10 Tea Break

11:10-12:00 Note taking practice-use the solutions suggested by the larger group

12:00-12:30 PowerPoint Presentation – Technology – mentors present their ‘tools of the trade’

12:30-1:45 Lunch

1:45-2:20 Presenter provides insights pertaining to eating and resting habits and academic achievement. Main focus is a balanced lifestyle and not dietary advice.

2:20-3:00 Time Flies! Let’s multiply it!

Money exercise (ask delegates to take out the notes they have, let them hold it up, tell them to throw it up in the air—they won’t do it—point out that is what people do with time).

Video on time management (20 minutes)

<https://www.youtube.com/watch?v=y2X7c9TUQJ8>

Presenter and Mentors provide insights on Time Management

3:00-3:30 Small group discussion and feedback

3:30-4:00 Reflections and completion of summative evaluation

Power Point Presentation

Day One

- Dyslexia and its impact on my life
- Welcome and Introductions
- Expectations and Goals
- Research findings
- Living with dyslexia (video and discussion)
- Myths of dyslexia (video and discussion)
- Group discussion – dyslexia and me
- Dyslexia – a gift? (video and discussion)
- Reflection and evaluation

Research

- Purpose
- Method – semi-structured interviews
- Findings
 - Time management
 - Communication
 - Pace

What is Dyslexia?

- Video clip
- Discussion
- Feedback time

Living with Dyslexia

- How do you see your dyslexia?
-
- Video 1
- Group discussion
- Feedback to larger group
- Summary of findings

Myths of Dyslexia

- Video 2
- Group discussion
- Feedback to larger group
- Summary of findings

Writing

- Tests and exams—what do they want? (Presenter)
- Practice question reading and jot down answer ideas
- Planning Writing? You just did!
- Let's see—Checking and filling in the blanks

Day Three

- Welcome and arrangements
- Noted! (taking or not taking notes—that's the question!) (Mentor sharing)
- Small group discussion, and report back
- Let's hear (practice session)
- Tools of the trade (technology)
- Food for thought—diet and exercise (Researcher)
- Time flies! Mentor sharing

Time Flies!

- Video – you're not alone!
- <https://www.youtube.com/watch?v=-opxaWMoZxo>
- Sharing from Mentors

This is it Folks!

- Final discussion
- Summary
- Evaluation

Formative Assessment Dyslexia Workshop

Days: 1- 3

Date:

Presenter(s):

Please respond to each item by circling the number which best describes your opinion.

(5=excellent through 1=poor)

A. Process – Teaching activities and materials

- | | |
|---|-----------|
| 1. Presentations were well organized | 5 4 3 2 1 |
| 2. Objectives were clearly stated | 5 4 3 2 1 |
| 3. Activities and assignments were relevant to objectives | 5 4 3 2 1 |
| 4. All necessary materials/equipment/resources were readily available | 5 4 3 2 1 |
| 5. Overall presentation | 5 4 3 2 1 |

B. Content

- | | |
|---|-----------|
| 1. I have developed an awareness and knowledge from the content of the session that is relevant for my academic achievement | 5 4 3 2 1 |
| 2. The content of the presentation is relevant to improving time management | 5 4 3 2 1 |
| 3. The activities empowered me to want to study differently | 5 4 3 2 1 |
| 4. The activities enhanced your personal growth | 5 4 3 2 1 |

How did the workshop sessions relate to your situation and in what way(s) has it caused you to review your dyslexia?

What new ideas have you learned and how do you plan to implement these new ideas in your studies and life?

What information was of greatest value to you?

What suggestions do you have to improve this workshop on coping with dyslexia?

Additional comments/suggestions:

What new ideas have you learned and how do you plan to implement these new ideas in your studies and life?

What information was of greatest value to you?

What suggestions do you have to improve this workshop on coping with dyslexia?

Additional comments/suggestions:

Teacher skills, and facilitates structured exceptional thinking (Anastopoulos & King, 2015). Researchers stated that a mentorship program helps the dyslexic students in college to establish patterns or standards for success to be used in college to become academically successful (Kimball, Wells, Ostiguy, Manly, & Lauterback, 2016). Mentoring programs for students with disabilities increase the analysis skills of students and assist with minimizing overload by relying on the students' strengths and learning styles.

Summative Evaluation

Name _____ (optional)

Date _____

Please answer the questions below and thank you for your participations.

1. Did the presentation meet your anticipation?
2. Would you recommend this project to other dyslexic students?
3. Did the location provide a security setting?
4. Were the information and notepad useful?
5. Was the information presented helpful in the classroom setting?
6. Are there any topics you might have for the presenter to implement during future presentations?

Again, thank you for attending the mentoring program and we certainly appreciate your input.

If you have any questions, do not hesitate to call or email me.

Cut or tear off the bottom portion with my information

Mentor/Facilitator Notes

This workshop is the fruit of our labor. Your input helped me to gain insight into the challenges you face at college and how you manage those. With your assistance, we will be able to help fellow students who have the same experiences as you. This is your opportunity to be that friend, whom you perhaps looked for—one who understands and can point you in the right direction; one who empowers you without overpowering you by doing everything on your behalf.

As you have indicated, student support services are not always helpful and knowledgeable, and sometimes the student does not want to self-disclose as ridicule and ‘special’ treatment may follow (Hong, 2015; McPheat, 2014). By being labeled as someone who has special needs can result in a chain reaction that includes biases and preconceived ideas from the lecturers which is also not what the student wanted. The already high level of demands on emotional and intellectual energy often let students decide to not complicate their lives further by reporting disabilities at student support services (Hong, 2015; Moríña, 2017). The reaction of others may lead to decreased self-esteem and confidence which could negatively affect stress levels and academic achievement of students with learning disabilities.

Although researchers found that students with disabilities who visited the student support services achieved a higher GPA compared to their peers, they often do not go due to the way that society reacts to LD students (Abreu, Hillier, Frye, & Goldstein, 2017; Brown & Broido, 2015). The reaction of society on the disability can lead even increase the

impact of the disability in that specific situation. Brown and Broido (2015) suggested that the students with disabilities should be asked to participate in discussions regarding accommodations for them.

With this workshop, we will provide an environment of information and collaboration that will give students with dyslexia the confidence to voice their opinions in a relaxed and positive atmosphere without fear of being ridiculed. Such a situation will reduce stress and anxiety and allow the students to be more open with their opinions and issues that need to be addressed. This workshop is aimed at making life easier to students with dyslexia and without your assistance I would not be able to help. I therefore thank you for being willing to facilitate during the workshop and to share your experiences and solutions with the participants. Together we shall make a difference!

Mentorship

Dyslexia is slowly being recognized as a hidden disability (Sutton & Shields, 2016). By hosting this workshop, this post-secondary school is one of the few that are proactive to ensure that dyslexic students can access and participate in education at the same level as their peers (Castle, Wheldall & Nayton, 2014). Mentoring is an effective way to assist dyslexic students because it allows the students to generate their own goals as well as implement shared goals between the novice dyslexic students and their dyslexic mentors (Wallace, 2017). Flink (2017.), the founder and CEO of Eye to Eye—an advocacy and mentoring system by students with dyslexia for students with dyslexia—stated that not only do the mentees benefit by the program, but mentors indicated that they can communicate

better and are more able to speak up for themselves (Eye to Eye, 2016.). So hopefully this workshop will be a win-win situation for all of us!

A mentoring program should increase the expressive well-being of students with disabilities, provide knowledge about campus resources, increase organizational skills, and facilitate structured thinking (Anastopoulos & King, 2015). Researchers stated that a mentorship program helps the dyslexic students in college to establish patterns or standards for success to be used in college to become academically successful (Kimball, Wells, Ostiguy, Manly, & Lauterback, 2016). Mentoring programs for students with disabilities increase the analysis skills of students and assist with minimizing overload by relying on the students' strengths and learning styles.

Through this workshop that links achievement strategies (coping skills) with your mentoring, we aim to increase the participants' self-efficiency and success, while reducing the college dropout rate (Briener, Markman, & Pernice-Suca, 2016). Academic and social integration in college will assist students to gain the skills that will help them stay in school. Your assistance and expertise will benefit the participants as you lead them through the day to day difficulties they face, become a beacon of inspiration, and become part of their network of help.

In all, I am sure you know exactly what kind of assistance is needed as you have walked down this road before. We want to allow the participants to develop insight, become able to voice their needs and opinions, and find a way to deal with challenges. We will therefore focus on facilitating individual growth and not provide ready-made answers.

This workshop is meant to be a journey of self-discovery mixed with ample time to practice skills which include communication with others and have a bit of fun!

Overall format of sessions

Each session will contain the following:

Information on the topic (video, anecdotes or stories, information)

Small group discussion—mentors facilitate and get participants to express their opinions of strategies

Feedback to the larger group and note taking (participant volunteer from groups)

Practical implementation or search for coping strategies

Summary of findings (participant volunteer / mentor / researcher)

Post the notes on the wall / notice boards for scrutiny

Group Talk

What to do with the quiet person or the overly talkative ones? Perhaps you have experienced similar situations with yourself—what worked for you? This might help the participants too! Alternatively, we have tokens in the sessions that you may hand out to the participants—drop a token on the table when you talk and once they are all used you may not talk. This normally helps people to structure their thoughts and to limit the number of turns they take.

For the quiet person—ask by name: “Mary, we would really like to hear what your opinion is here.” If that seems too direct for the person, try looking at him/her expectantly. You could also ‘warn’ them that you would like a reaction from them by stating something

like “Okay, after you two have had your say, Mary can add to that.” Be attentive to the shy ones and befriend them during breaks to create a feeling of being accepted and important.

Final Sessions

The final session of each day will include an overview of the aims for the day and checking how it fits in with the goals that were set at the beginning of the workshop.

Ultimately, we have to ensure that the participants’ expectations for the workshop have been addressed. A formative evaluation will conclude the day.

Day One

- Day 1 – Dyslexia and its impact on my life
- Welcome and Introductions
- Expectations and Goals
- Research findings
- Living with dyslexia (video and discussion)
- Myths of dyslexia (video and discussion)
- Group discussion – dyslexia and me
- Dyslexia – a gift? (video and discussion)

After watching the short videos, the participants will divide in smaller groups facilitated by you. Participants will get random colored chips when entering the venue and they have to sit at the table with that color table cloth—those will be group members for the day. The aim of the videos and discussions is to explore the ways dyslexia impacts on the participants’ lives on campus and beyond. For some participants, this may be the first opportunity to express their experiences, beliefs, and concerns.

You might find it necessary to sometimes share your own experiences to get the conversation going. By the end of the day we would like the participants to be able to

explain to people what they experience and ask for assistance. They also should be empowered by the last video to see dyslexia in a more positive light by identifying their gifts.

If a student finds it hard to explain or share feelings that are emotionally laden, they might be able to draw an image or cartoon (a sheer gift!). Alternatively, they might be able to show by acting it out or let you listen to a song that conveys how they feel. They might also have written a song that the group could listen to. Look for different ways in which the participants could share their ideas beyond talking only

Day Two: Reading and Writing

- Welcome and arrangements, feedback from day one
- What do I see before me? (Mentors)
- Small group discussion, and report back
- Ready, read!
- Assessments and tests – What do they want?
- Let's look
- Writing?
- Discussion and practical solution finding
- Final discussion, summary and evaluation

On day two, the participants will divide into study subject groups as we are going to read study topic specific material and study exam papers. You will get the opportunity to facilitate a group that is similar to your own study topic. I have arranged with some of the mentors to share their experiences pertaining to reading with the participants. Thank you for your willingness to share your stories.

The overall aim of today is to practice reading tricks of the trade that you and the participants have developed. By sharing experiences and practicing new skills, the participants will be empowered to tackle reading and writing with more insight when they are back at school.

Mentors who have agreed to tell their stories about reading challenges and how they are managing will lead this session. After the narratives, the small group discussions together with feedback will follow. The aim of this session is to explain what one's challenges are, realizing that everyone in the room struggles. You're not alone. How can the barriers be overcome? Feedback in the larger group is aimed at coping techniques that can be practiced in the workshop. The practice session will make use of reading handouts that are subject specific as the focus of the day is on overcoming the particular subject areas.

Interpreting Exam Questions

Discussions will be led by the presenter, making use of insights like those in the paper below. The main focus will be 'instruction words' and 'question words,' as well as exam instructions.

Understanding questions

Instructions for assignments and coursework or examination questions require your full attention to how the question or instruction is phrased. When you do not answer the question fully you will not get good marks. This is a very common problem during examinations when students are in a hurry to complete the test.

Most commonly students write vaguely or too generally around the question topic. They do not pay attention to the specific instructions and the limits of the question. Questions posed to you will never address such broad titles like “globalization” as this is far too broad and does not give direction. You may instead have to discuss / analyze / define aspects of globalization—for example, the impact thereof on specific countries, advantages to specific age groups, etc. By observing the instructions, restrictions, and guidelines provided, you will be able to write appropriately and get good marks.

Sadly, the opposite is often true. When taking exams, keep referring to the question to check that you are on track. If some information is not relevant, refrain from writing it.

Many students do not give themselves enough time to analyze and plan a response to an assignment or exam question. Planning your response is time well spent. These questions and instructions are carefully chosen and should be attended to when planning your response. When you are able, check the meanings of words that are unfamiliar to you or are used in a different manner. You should make absolutely sure of what is asked before you start writing. During semester time, ask your tutor or class mates to assist you in interpreting the assignment instructions. Should you misinterpret only one word it can derail you completely and your reply could be irrelevant. Make sure that your introduction and conclusion is perfectly focused on the question showing how well you interpreted it.

Components of a question

Being aware of the components of sentences is useful.

Subject/topic. The subject is the central idea of what you are writing about—most often it is linked to part of your course. You should be able to condense this in a few words.

Instruction words. These are the action verbs in a sentence, e.g. outline; discuss; evaluate; compare and contrast; etc. These words tell you what to do and you follow them exactly. Use your dictionary to check your understanding of these special instruction words.

Key aspects. Other important words are those that define your answer. These can be descriptive words or refer to time, places, people, laws, eras, etc. Words such as impact, consequences, lead to, advantages, etc. are important in interpreting a question and define the scope of your answers.

(Based on Williams, K. *Writing Essays Oxford Centre for Staff Development*.

This useful book includes practical activities on analyzing questions).

Types of questions

As discussed, the instruction words will tell you what to do and how you should plan your reply. You should determine whether you need to provide facts, descriptions, pass a judgment on something, discuss, or evaluate something. Only on rare occasions will you have to produce a descriptive piece of writing. You may, however, be asked to outline some facts related to your discussion before evaluating or discussing something. This second part where you evaluate or discuss requires more insight and will earn you higher grades.

Practical session. Use exam papers and study the questions in groups of two or three participants. The students practice how to interpret the exam questions using the

information provided. They have to make key notes on how to answer the question—planning the answer thus. At the end of the session, the answers can be discussed in the table group deciding if all the elements are included, sequencing correctly, and ending up with an answer structure to the questions.

Day Three: Note taking, Technology and Time Management

- Welcome and arrangements
- Noted! (Taking or not taking notes—that’s the question!) (Mentor sharing)
- Small group discussion, and report back
- Let’s hear (practice session)
- Tools of the trade (technology)
- Food for thought—diet and exercise (Researcher)
- Time flies! Mentor sharing

Mentors get the opportunity to share their stories about note taking experiences and how they manage it. At this stage, the use of technology is not discussed as there is another session that exclusively focuses on that issue. The discussion session that follows focuses on the participants’ experiences with note taking, what they tried to be more successful, etc.

During the feedback in the larger group the focus is again on which strategies the groups felt could work the best. During the practice session, the mentors will read subject-related material to the group and expect them to take notes, thus practicing the new techniques to develop some familiarity with it.

Use Technology to make Life Easier

Mentors will get the opportunity to share and demonstrate their favorite technical devices and explain why they use those. This will be followed by a question and answer session.

Food for Thought. The presenter will discuss a balanced lifestyle focusing on eating and sleeping habits, as well as relaxation and socializing. The aim is to create awareness of the different elements in a healthy balanced lifestyle. A question and answer opportunity will follow this discussion.

Time Management. After watching the video, the mentors will get the opportunity to share their experiences and solutions. Thereafter the group can discuss their ideas and share tips.

Conclusion

The presenter will close the workshop by summarizing the 3 days and checking that all the expectations of the participants were met. This process will make use of the formative and summative assessments.

Appendix B: Interview Protocol

Project: Mentoring

Time of interview:

Date:

Place:

Interviewee:

Interviewer:

Introductions will begin the interview to make everyone feel comfortable while attending the interview.

The project study will be used to foster other dyslexic students attending college to increase their Grade Point Average (GPA). The information or strategies that you share today will be beneficial to the students with dyslexia. Each strategy that you use in the classroom to maintain a 3.0 will give insight to the mentoring program in the workshops. Therefore, this face to face interview will be used to collect data and the observation notes will assist me to understand you more, the interview will take about one-hour, and I will administer 17 questions for you to answer, After, I have typed your response to the question, I will send you an email with the information about the three different dates, time, and place to review the information you shared with me during the interview.

May I use the recorder to assist me with data collection? I will ensure that the participant understand the requirements asked of him or her. I will restate that all data collected will remain confidential and that pseudonym or a number or alphabet letter will replace your name to ensure that all area of the interview will remain confidential. After which I will ask the participant if they have any question, if they do not have any question I will inform the participant that I am going to turn on the recorder. After the interview, I will ask the participant if they have there are any questions. After which, I will restate to the participant that I will send them an email to meet again to review the transcribed data collected during the interview for corrections. If there are any corrections to be, I will make corrections, and resend an email with 3 different dates and time for the participant to choose for the second time to proofread their information given during the interview. I will thank the participant for the time and support with the research.

Sincerely,

Mary Joyce Taylor-Talley

In School Suspension Teacher

Appendix C: Interview Plan

Hello. My Name is _____, and I would like your input about the strategies you used in class to maintain a Grade Point Average of 3.0 with your disability.

Participant pseudonym	Additional Questions	Clarifying Questions
17 Questions See Appendix H		

Appendix D: Interview Questions

1. What challenges related to your diagnosis of dyslexia have you identified that make learning difficult for you?
2. What types of academic accommodations are available on campus for students with dyslexia, such as extra time for completion of assignments, small group testing, or additional time for tests?
3. What types of academic accommodations have you used? Were they helpful? If not, why not?
4. What types of academic support are available on campus for students with dyslexia such as peer mentoring, tutoring, seminars, or workshops?
5. What types of academic support have you used? Were they helpful? If not, why were they not helpful?
6. Does the college have tutors who understand specifically how to help students with dyslexia? How have they helped you?
7. What are some other ways that the college helps students with dyslexia? If so, do you have to pay extra for them?
8. What strategies have you used to overcome the challenges you face in order to become academically successful in college?
9. Which of the strategies were the most helpful? Why were they helpful?
10. What strategies have you tried that were not successful in helping you overcome academic challenges? Why were they not helpful?

11. What type of peer support do you have? How are your peers helping you?
12. What type of family support do you have? How are they helping you?
13. What type of support do your teachers provide?
14. What strategies are you using now that you feel might help low performing dyslexic students?
15. What advice would you offer to other students with dyslexia that might help them to be successful in college?
16. Would you like to share anything else?
17. Do you have any questions for me?