A Comparison of Perception of Agency and Skills Related to Retention at

Community College by Students Having a Learning Disability or Autism

by

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ABSTRACT

The purpose of this study was to examine the perspectives of successful community college students classified as neurotypical (NT), learning disabled (LD), and autism spectrum disorder (ASD). Using mixed methods, 45 successful students completed two surveys designed to assess their overall hope as well as specific academic skills and strategies used as part of their postsecondary educational experience. Interview questions were then generated based on the results of the quantitative analysis. Fifteen of the 45 participants were randomly selected to take part in a follow-up qualitative interview. Results indicated some commonality among the successful students with relation to overall attendance, use of email as a communication tool with professors, self-advocacy as it pertained to seeking support from professors and individualizing and personalizing the class/professor selection process. The findings suggested that there are specific strategies associated with student success at the post-secondary level and both K-12 schools and community colleges could incorporate skill building in these areas to improve retention and graduation rates.

DEDICATION

I would like to dedicate this dissertation to my beloved family. I want to thank my parents for the constant and unwavering love and support they have provided me. Words cannot describe my appreciation for my wife Tracy who has walked beside me on every step of this long journey. Her love and kindness are an integral part of any of my accomplishments. Finally, my sons Brady, Chase, and Peyton make me proud every day and I love them very much. I want them to know that hard work pays off and that they can accomplish anything they set their minds to.

ACKNOWLEDGMENTS

I would like to recognize Diana Hanbury King who first taught me that a disability was merely a difference and she ignited in me a passion to help those who learn differently.

Also, I would like to acknowledge all of the students I have had the pleasure to work with over the years. You are too numerous to name but each of you have left a lasting impression on me.

I want to acknowledge the time, effort and energy that my dissertation committee put into this process. They have been patient and supportive and I appreciate all that they have done to help me.

Most importantly, I would like to thank my mentor, Dr. Kathleen McCoy. At times, Dr. McCoy has taken on the role of a guide, a cheerleader, a parent, a coach, and numerous other roles that have all been integral to my success. It is no exaggeration to say that without her support, this dissertation would not have been completed. I want to thank Dr. McCoy for she gave me the precious gift of her time and always shared her expertise without complaint. I will forever be grateful to her for all that she has done for me.

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CHAPTER 1

INTRODUCTION

Young adults with learning disabilities (LD) and those on the autism spectrum

(ASD) are attempting post-secondary education at the community college or university in

larger numbers than during the past decades (Miller, 2010; Ponticelli, 2009; Shaw,

Madaus, & Banerjee, 2009). Success at post-secondary college endeavors is not

promising. Statistics related to retention and graduation for LD and ASD individuals fall

far below those of neurotypical (NT) peers (Costenbader & Janiga, 2002; Emery, 2009;

Milmson & Hartley, 2005). Lower success rates in achieving post-secondary goals can

impact the confidence and morale of students and also decrease the chance for effective

and sustainable employment (Hernandez, 2011; Miller, 2010). Many reasons have been

linked to the role played by various support systems, e.g., family environment or

secondary preparation (Milan, Hou, & Wong, 2006). The literature has suggested that

goal achievement is strongly related to an overall perception that goals are achievable,

that is, the individual must have hope that successful attainment and meeting the goals is

possible (Beck, Weissman, Lester, & Trexler, 1974; Cantril, 1964; Erickson, Post, &

Paige, 1975; Farber, 1968; French, 1952; Menninger, 1959; Schachtel, 1959; Stotland,

1969). More specifically, according to Snyder et al. (1991), hope is defined as a cognitive

function derived from a sense of successful agency (goal directed determination) and

pathways (planning to meet goals). The construct of hope is based on the assumption that

an individual's belief that success is possible affects goal directed actions and realization

of positive outcomes. In other words, hope is a cognitive anchor upon which the attempt

to or completion of goals is based (Locke & Latham, 1990; Pervin, 1989). Goal-directed

thinking encompasses two interrelated components: agency and skill sets related to the goal. Agency addresses the individual's perceived capacity for initiating and maintaining the actions necessary to reach a goal. The individual must also have the skill set or cognitive knowledge of how to generate successful actions leading to goal attainment (Snyder et al., 1996).

According to the Individuals with Disabilities Act (IDEA), a learning disability involves difficulty with regard to writing, speaking or properly understanding words and language and this difficulty impacts reading, spelling, writing, processing and math while IDEA defines autism as challenges related to both verbal and nonverbal communication that can impact educational, and consequently academic, success (U.S. Department of Education, n.d.).

Although individuals with disabilities strive to attend college, retention and completion rates fall below neurotypical students. Students with any diagnosed disability continue to struggle at the post-secondary level and are not as successful as their nondisabled peers; 45% of individuals with all disabilities pursue post-secondary education within 4 years of graduating from high school as opposed to 53% of the nondisabled population (Shaw, 2009). Even those who attend post-secondary institutions tend to struggle as students with disabilities are less likely to stay in post-secondary education (Keel, 2000). The U.S. Department of Education (as cited in Costenbader & Janiga, 2002) reported that since 1989, only 53% of students with disabilities either had completed their post-secondary degree or were still enrolled as compared to 64% of students without disabilities (Milmson & Hartley, 2005). Many students with disabilities do pursue post-secondary education, but they often do not complete their program of

study and while students with disabilities are more likely to attain a vocational certificate, they are less likely to earn an Associate's or Master's degree (Horn & Berktold, 1999).

Given the low retention and graduation rates of individuals with LD or ASD, an initial exploration of such individuals' belief that success is possible and the level of skill set leading to positive post-secondary experiences seem to represent basic and, as of yet, unanswered questions. This dissertation examined perceptions of individuals with LD or ASD in terms of agency as well as selected initiation and maintenance actions necessary to generate successful community college retention and subsequent graduation.

CHAPTER 2

LITERATURE REVIEW

Literature in support of this dissertation is organized into five categories related to students diagnosed with LD/ASD: comparison of support received from high school and post-secondary levels, communication and advocacy, logistical challenges, success strategies, and Ecological Systems and Theory of Hope. In addition, literature based on barriers to post-secondary success for individuals diagnosed with LD or ASD is organized into five categories: transition, logistics, advisement, disability resources, and self-advocacy. The proposed investigation of factors associated with success for individuals with either LD or ASD at the college level is in response to the existing literature on the poor transition results of individuals with LD and ASD to post-secondary settings and the positive implications of identification of factors that are associated with community college success.

In a review of the literature, several important trends related to college experiences of individuals with ASD or LD have emerged and are listed below:

First of all, there are disparities in the level of support from secondary to post-secondary settings. In K-12 schools, special education placement and services are guided by an IEP process that is comprehensive and provides academic and social support, and expects input and involvement from parents as well as other stakeholders. However, the transfer of rights from the parent to his or her child at age 18 reduces parental involvement in educational planning (Butler, 2009). Therefore, the student is asked to assume additional responsibility; K-12 educational settings provide extensive team support whereas receiving provision from post-secondary settings is a process left to the

discretion of the student (Butler, 2009; Konrad, 2008). In addition, there is no official IEP document providing a structure of support in post-secondary settings (Madaus & Shaw, 2006).

Another important trend related to post-secondary educational success for students diagnosed with LD or ASD connects to communication and advocacy for ASD/LD students. Once reaching the age of 18, students must advocate for themselves (Barker Bouck, 2009; Madaus, 2005; Peters, 2011; Shaw, 2009). Also, communication challenges may impact effective communication of academic profile and needs; for example, the student may struggle to formulate ideas when meeting with a disability services staff member or a college professor (Reif, 2011). Students diagnosed with ASD/LD may have difficulty in academic events requiring social interactions because of their communication challenges (Reif, 2011; Stanberry, 2016). Communication challenges can impact students in a myriad of ways. For example, individuals with ASD/LD experience difficulty with communication and social skills which impact interactions with instructors and peers (Meyers, 2009; LaVoie, 2005; Stanberry, 2016).

Another trend impacting post-secondary success involves management challenges for ASD/LD students at the college level. Management-logistics processes like the admissions process, financial aid applications, the possible transfer of credits, college placement tests, and the selection of classes, etc., can present problems for students diagnosed with LD and/or ASD (Driscoll, 2007; Emery, 2009; Freedman, 2010; Miller & Murray, 2005; Wegner, 2008). In addition, time management difficulties can cause students to be late to class, procrastinate, and fail to submit assignments in a timely manner which can significantly impact their chances for success (Wegner, 2008). Also,

there is a connection between emotional intelligence, coping and self-management strategies, and a lack of emotional intelligence can impact success (Borin, 2012).

Success strategies for students diagnosed with LD/ASD is another trend related to post-secondary educational success. Research indicates that student's utilization of campus support systems increases chances of success (Troiano, Liefeld, & Trachtenberg, 2010; Wegner, 2008). Related research describes academic and social integration on the college campus and the connection to post-secondary educational persistence (DaDeppo, 2009). In addition, there is a demonstrated connection describing the importance of utilizing disability services on campus (Rodriguez, 2015). Also, there is research demonstrating that there are specific skills necessary for college success (Freedman, 2010).

Ecological Systems and Theory of Hope can offer insight into some of the intrinsic and extrinsic factors that influence success at the post-secondary level. For example, research describes the influence of others, e.g., parents, instructors, and college staff, on the success of the student (Bronfenbrenner, 1977; Dyson, 2010; Seals, 2010; Theokas et al., 2005). Also, the belief in the capability to begin and sustain actions is important to student success (Sinnott, 2008; Snyder, 2002; Snyder, 2005; Synder et al., 1991). Goals are mediated through experience with agency and the possession of knowledge for how to attain the goal (Beck, Weissman, Lester, & Trexler, 1974; Cantril, 1964; Erickson, Post, & Paige, 1975; Farber, 1968; French, 1952; Menninger, 1959; Schachtel, 1959; Stotland, 1969).

Barriers to Postsecondary Education - Transition

One significant challenge for students with disabilities is that support systems at the high school level are no longer available or significantly reduced (Butler, 2009). At the high school level, students are supported by two important pieces of legislation; public high schools provide support services to students through IDEA and Part D of Section 504 of the Rehabilitation Act of 1973 (Madaus & Shaw, 2006).

Public high schools are responsible for the identification of special needs students and then the creation of an IEP or 504 plan that will guarantee special education services and accommodations. If a student qualifies for extended time on tests, the accommodation will be listed on the IEP or 504 plan. The special education staff will work with regular education teachers to ensure the student receives additional time on the test. Ideally, students play an active role in this process of identification of the types of services provided through the IEP or 504 plan. Unfortunately, many students are casual observers to the process who receive the benefits of support services without being responsible for significant self-advocacy (Konrad, 2008).

Support systems change when students with disabilities enter a post-secondary institution. Community colleges and universities support students based on Part E of Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA); these two pieces of civil rights legislation require significant self-advocacy and self-determination (Shaw, 2009). At the college level, almost all responsibility for identification, evaluation, generation of support plan, transition planning, and determining and providing reasonable accommodations fall on the student (Madaus, 2005; Peters, 2011; Barker Bouck, 2009). Although public high schools create supports

in the form of accommodations and modifications designed to help students with disabilities succeed, colleges typically only assist students with gaining access to the curriculum through accommodations. In order to qualify for accommodations at the college level, students will have to accurately describe their disability and explain which accommodations are needed in order to justify the request. Theoretically, a student could graduate from high school with an IEP and receive services and accommodations without even having a clear understanding of his or her disability (Konrad, 2008). Many students with disabilities experience challenges when required to accurately describe their disability and self-advocate in order to arrange accommodations.

The actual services provided vary significantly from high school to college. At the high school level, smaller class sizes, instructional aides, and even lowered standards (e.g., less homework, different tests) are not uncommon (Madaus, 2005). None of these accommodations are available at the post-secondary level. Additionally, colleges will not necessarily allow the same accommodation for all of a student's classes. Required classes for a degree can rarely be waived or substituted and the student must provide documentation to justify each accommodation (Katsiyannis et al., 2009).

Parents represent a significant source of support and advocacy for many individuals with disabilities at the K-12 levels. Throughout high school, parents often attend IEP meetings and help the school to monitor student progress and ensure that appropriate support services are being provided. At the college level, the student becomes the driving force behind educational supports. Parents, regardless of their involvement level in high school, are no longer the deciding factor with regard to the student's education. Post-secondary educational institutions are not required to recognize

the input of parents in any part of the educational process (McClouden, 2007). As a result, parents who had been such a vital part of the support team for the student are reduced the role of concerned observer. Students must then take responsibility for arranging accommodations, making sure the accommodations are implemented and working with professors to deal with challenges related to the course content (Cano-Smith, 2009).

Barriers to Postsecondary Education - Logistics

Additional challenges face individuals with learning disabilities as they attempt to succeed at the college level. The admissions process, in particular, can be daunting and requires effective time management for the submission of materials according to a strict timeline, which can be challenging for individuals with disabilities who may struggle to complete applications in a timely manner (Wegner, 2008). A guide for incoming freshman from Mendocino College, California recommends that students complete all of the following: submit a financial aid application in a timely manner, build a relationship with an academic counselor, arrange records and transcripts, and visit a student transfer center (Driscoll, 2007). The process could be very overwhelming and intimidating for potential students. Gathering transcripts can be frustrating and challenging for students as well. In addition to acquiring the requisite transcript information, students must be familiar with the content of their transcripts; that way, the student can anticipate any problematic issues with class choices or grades (Emery, 2009). The process, from beginning to end, requires organization, diligence, and self-advocacy skills.

Many community colleges require a placement examination before a student can begin taking classes and students with disabilities tend to struggle on these assessments

because of difficulty with timed tests, a lack of effective test taking strategies, and reading challenges just to name a few (Corcoran, 2010). Placement examinations can be especially challenging because they exacerbate student challenges with timed assessments and dealing with test taking anxiety. Accommodations are available on these tests but the process is complicated and requires documentation of a disability.

Barriers to Postsecondary Success - Advisement

Students with learning disabilities must also meet with an academic advisor to select classes. The National Academic Advising Association (NACADA) offers a list of advisement tips for working with "academically underprepared" students (Miller & Murray, 2005). These suggestions include identifying student strengths, matching student learning style with instructor's teaching style, helping students determine the optimum time of day for classes, and helping the student set long- and short-term goals (Miller & Murray, 2005). The reality of the advisement process involves long waits, hurried appointments, and a class selection process based on open classes rather than the best educational fit for the student. Selecting classes also requires organization and time management on the part of the student. Time management can be a challenge as some learning disabled students struggle with organization and may wait too long to sign up for required classes and then must take classes at unfavorable times like early mornings or weekends. The amount of support students receive during this process likely depends on the admissions counselors.

Barriers to Postsecondary Success – Disability Resources

Students with disabilities may be eligible to request reasonable accommodations through the disability resource office. Reasonable accommodations are changes in a

college course to make sure that a student with a disability can access the class without discrimination (Johnson, 2011). In order to arrange extended time on an assessment, for example, the student must set up a meeting with the disability services office and present a copy of his or her psychological/educational evaluation identifying a disability. The evaluations must be current and should be an adult measure; many community colleges and universities require that the testing be recent. The student must then contact the disability services office and present his or her request for accommodations. The disability resource office evaluates the documentation and then makes a decision on whether or not to grant accommodations. Students must reapply for accommodations at the beginning of each new semester. If the student is allowed the accommodations, he or she must then submit the request in writing to each of the professors. If the accommodations are not provided, the student must report back to disability services with a complaint. Self-advocacy is critical as students must communicate effectively with disability resource staff to ensure appropriate accommodations are in place. Each step of the process offers challenges for students with learning disabilities, particularly those who have not built self-advocacy skills and have relied on parents and teachers through high school (Madaus, 2005).

Some students simply choose not to request accommodations. They may do this for a number of reasons including, but not limited to, identity issues, a desire to avoid being judged negatively by others, not enough knowledge about accommodations, belief that services are not useful, and possible negative past experiences with staff (Marshak et al., 2010). Research indicates a correlation between the use of accommodations and

graduation as students with disabilities who utilize accommodations graduate at a higher rate than those who do not (Ange, 2011).

Barriers to Postsecondary Success - Self Advocacy

The burden of responsibility at the college and university level falls on the student, making self-advocacy a critical skill. Self-advocacy means students recognizing their own relative strengths and weaknesses and being able to share that information with those in a position to offer support (Miller, 2010). Frequently, students with disabilities have not taken an active role in IEP meetings during the K-12 educational experience and have, consequently, missed a valuable opportunity to develop self-advocacy skills (Miller, 2010).

As students with learning disabilities apply, enroll, sign up for, and begin to take classes, many of them do not self-advocate because of a lack of practice, confidence, or a combination of both (Madaus, 2005). Self-advocacy is especially important when meeting with disability services counselors to request accommodations. Students must understand their disability and how they are impacted and the student must also be aware of what rights and supports are available. Finally, students must have the confidence and communication skills to speak up on their own behalf. Because students with learning disabilities often have less developed self-advocacy skills than nondisabled peers, they face many additional challenges at the college level (Cano-Smith, 2009).

Students with learning disabilities may require direct instruction when building self-advocacy skills (Kosine, 2006). Some research even indicates that a poor self-perception may limit the likelihood of student's advocating for themselves to gain vital support and accommodations (Kosine, 2006). Studies have also demonstrated that

training in self-advocacy can help improve student outcomes at the college level (Wysocki, 2003). Self-advocacy is critical for students with learning disabilities as they navigate the complexities of post-secondary education.

Summary of the Literature

Review of the literature revealed some common themes with regard to both effective strategies for and barriers to post-secondary success. Research has indicated the importance of awareness of the differences between K-12 and post-secondary education, the role advocacy and communication play, and Ecological Systems and the Theory of Hope. Research reveals that planning is important to deal with logistical challenges and that specific academic skills can increase the chances of student success. Barriers to post-secondary success include the transition process, challenging logistics, meeting with college advisors, utilizing the disability resources office, and employing self-advocacy.

The review of the literature identifies college students with LD and ASD as emerging and underserved populations in higher education. However, literature does not adequately address interventions for low rate of retention for college students with LD or ASD. Literature suggests various reasons for low levels of success, but does not provide information from the perspectives of the students as their own change agents or the level of their skill set for college success. In addition, the body of knowledge related to successful retention of college students with LD and those with ASD is sparse in terms of comparisons or practices. Given the increasing enrollment, educators at secondary level and disability professionals in higher education are in immediate need of knowledge related to factors influencing initiation and retention in order to better serve students with LD or ASD at the post-secondary level.

Based on literature, the following questions will be addressed:

Research Question 1: Will perception of agency differ for students with ASD, LD. and typical students enrolled in the community college system?

Hypothesis 1: Community college students classified as ASD will have the lowest perception of agency and typical students the highest with the perception of students with LD falling midway between the two populations.

Null Hypothesis 1: Perception of agency will not differ for students with ASD, LD, and typical students enrolled in the community college system.

Research Question 2: Will perception of agency be related to the performance of students with ASD, LD, and typical students enrolled in the community college system?

Hypothesis 2: Perception of agency will be significantly related to the performance of students with ASD, LD, or typical students enrolled in the community college system with students with ASD with the lowest perception of agency and typical students the highest with the perception of students with LD falling midway between the other two populations.

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Null Hypothesis 2: Perception of agency will not be related to the performance of students with ASD, LD, and typical students enrolled in the community college system.

Research Question 3: Will targeted behaviors differ for students with ASD, LD, and typical students enrolled in the community college system?

Hypothesis 3: Targeted behaviors will differ for students with ASD, LD, and typical students enrolled in the community college system with students diagnosed with ASD having the lowest level and typical students the highest with the level of targeted behaviors with LD falling midway between the two.

Null Hypothesis 3: Targeted behaviors will not differ for students with ASD, LD, and typical students enrolled in the community college system.

Research Question 4: Will there be a relationship between targeted behaviors and academic performance of students with ASD, LD, and typical students enrolled in the community college system?

Hypothesis 4: Targeted behaviors will be significantly related to the performance of students with ASD, LD, and typical students enrolled in the community college system with students diagnosed with ASD achieving the lowest level of

performance and typical students the highest with students with LD falling

midway between the two populations.

Null Hypothesis 4: No relationship exists between targeted behaviors and

academic performance of students with ASD, LD, and typical students enrolled in

the community college system.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

This dissertation examined the perception of individuals falling within the categories of neurotypical (NT), learning disabled (LD), or autism spectrum disordered (ASD) in terms of agency as well as initiation and maintenance actions necessary to generate successful community college retention and subsequent graduation.

A mixed methods evaluation approach combining both qualitative and quantitative elements was used in this study. Mixed methodology is based on the theory that biases inherent in one method could be neutralized by another method. Creswell (2009) defined concurrent mixed methodology as the process by which the research combines both qualitative and quantitative data to provide a complete analysis of the research problem. Quantitative and qualitative data are collected simultaneously and then integrated in the analysis of the results.

Quantitative data was drawn from two sources, the Adult Hope Scale (AHS) and the modified Hanish Transition Survey (HTS). The AHS is a 6-item scale; an internally consistent measure designed to offer valid self-report measures of ongoing goal-directed thinking (see Appendix A). The HTS is a scale designed to assess specific behaviors according to a series of research-based success strategies (see Appendix B).

The NT respondents reported that they had not been diagnosed with a learning disability or with autism spectrum disorder. Seven out of 15 were female and 8 out of 15 were male. One of 15 fell into the age range of 16-18 while 8 out of 15 were ages 19-21. Three out of 15 were ages 22-24 and 3 out of 15 were ages 25-28. All of the NT participants attended community college through the Maricopa County Community

College District (MCCCD). Eight of the 15 attended Glendale Community College (GCC), 5 out of 15 attended Scottsdale Community College (SCC), 1 out of 15 attended Paradise Valley Community College (PVCC), and 1 out of 15 attended Rio Salado College (RSC). The curriculum and management of the different community colleges was equivalent.

The respondents with LD all indicated that they had been diagnosed with a learning disability. Eight out of 15 were female and 7 out of 15 were male. With regard to age, none of the LD respondents were ages 16-18 while 3 out of 15 were ages 19-21. Nine out of 15 were ages 22-24 and 3 out of 15 were ages 25-28. All of the LD participants attended community college through the Maricopa County Community College District (MCCCD). Five of the 15 attended GCC, 5 out of 15 attended SCC, and 5 out of 15 attended RSC. Additionally, 9 of the 15 received additional support at the community college level from NorthBridge College Success Program. NorthBridge is an educational nonprofit agency supporting special needs students at the post-secondary level; the program provides academic tutoring as well as mentorship and social/communication support for students.

All ASD respondents indicated that they had been diagnosed with autism spectrum disorder. Four out of 15 were female and 11 out of 15 were male. One out of 15 was in the 16-18 year old category while 3 out of 15 were ages 19-21. Nine out of 15 were ages 22-24 and 2 out of 15 were ages 25-28. All ASD participants attended community college through MCCCD. Four of the 15 attended GCC, 5 out of 15 attended SCC, and 6 out of 15 attended RSC. Additionally, 11 of the 15 received additional support at the community college level from NorthBridge College Success Program.

Procedure

Some of the participants from GCC, PVCC, RSC, and SCC were recruited from recommendations from the disability services heads at each of the schools. Additional participants were chosen through personal contacts and referrals from Northbridge College Success program (see Figures 1-3 for a breakout of the number of students by type and school attended). Next, each student was sent an email asking for their willingness to participate in the study (see Appendix C for a copy of the email).
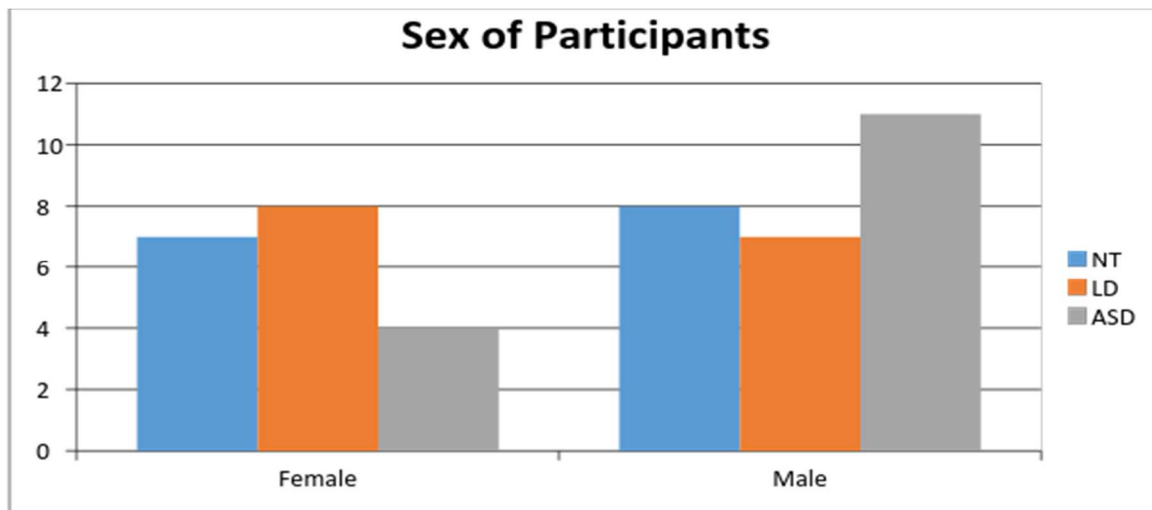
Figure 1 – Sex of participants

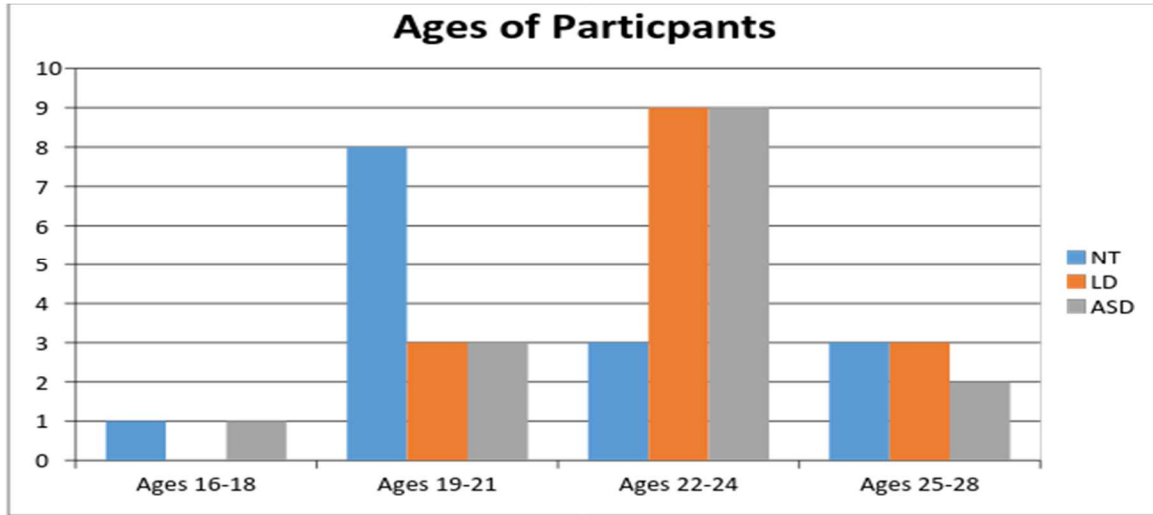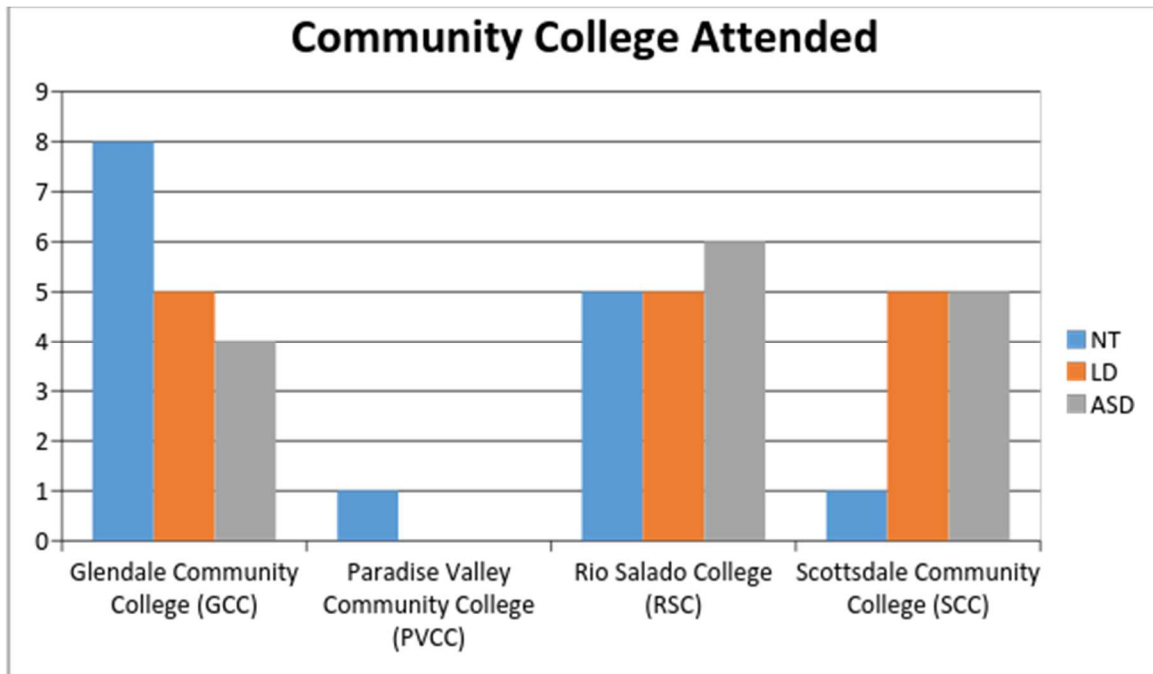Figure 2 – Ages of participants

Figure 3 – Community college attended

The AHS questions, the HTS, and demographic questions were uploaded into Survey Monkey, a website designed to facilitate the administration of surveys and the recording of survey data. Participants were able to enter their responses through a computer. Survey Monkey organized the responses according to data trend and also let users analyze individual responses. Analysis of quantitative data involved pulling mean scores from the three groups as well as examining similarities and differences across the three groups. Additional analysis examined trends across specific responses. Participants were reached in the following ways to complete the survey. Thirty out of the 45 total respondents completed the survey in person at GCC and SCC. The additional 15 respondents completed the survey at the offices of NorthBridge College Success Program in Scottsdale, Arizona. All of the respondents completed the survey in the presence of the writer of this dissertation. Moreover, all of the respondents completed the survey without any assistance. All participants who completed the survey were instructed that they would be entered into a random drawing for a $50 gift card if they agreed to complete the survey.

A comparison of the data across groups included simple numeric descriptions, including calculation of the means and subsequent analysis of the results. The overall averages were compared and then responses across specific questions were examined. The AHS and HTS results were analyzed according to the significance of respective answers by establishing baseline average scores for each of the respondents. The scores were taken from the Survey Monkey website and then means were calculated using SPSS software. These mean scores were identified across each of the three groups for the purpose of comparison and contrast.

Miles and Huberman's (1994) approach to data reduction, data display, and conclusion drawing was used for analysis of interviews. The interviews were conducted in a private office at NorthBridge College Success Program in Scottsdale, Arizona and only the interviewer and the interviewee were present. All of the interviews were conducted by the author of this dissertation. The interviews were recorded using a voice recorder and later uploaded onto a computer and saved as mp3 files. The writer of this dissertation, along with another Master's level student, were responsible for transcribing the interviews into transcripts saved as Google Docs. Using the Miles & Huberman model (1994) of analysis as well as techniques for interviewing based on the works of Spradley (1979) and Kvale (1996), the procedure for analyzing the trends was as follows. Once the interviews were transcribed from tape recorder to Microsoft Word and Google documents, initial trends were identified for coding. Each of these initial trends was assigned a specific color that was used for the coding process. The initial codes identified were social, self-advocacy, attendance/participation, specific academic skills, achieving goals, and use of disability resources. Data was coded, categorized, and emergent themes examined both within and across the interviews and the surveys. Inter-rater reliability was established at 90% for analysis of the interview data. The writer of this dissertation and one other Master's level student were responsible for establishing inter-rater reliability. Once the trends to be analyzed were agreed on, the two individuals' separately rated one interview as a trial and then compared the results. Once consensus with regard to trends and identification was reached, the two raters reviewed each of the remaining interviews and then compared the results to be sure the threshold of 90% was reached and/or exceeded.

CHAPTER 4

RESULTS AND DISCUSSION

Analysis of Adult AHS Scale

The AHS Scale was analyzed according to the significance of respective answers. Baseline average scores for each of the respondents were recorded. Mean scores across each of the three groups were compared for similarities and differences.

The AHS consists of 12, 8-point Likert scale statements with 1 point for a "Definitely false" response to 8 points for a "Definitely true" response. Four of the 12 statements are fillers and are not used in the scoring, that is, these items contained no relevant information. Of the remaining eight statements, four are used to calculate an Agency (goal directed energy) score and the other four are used to calculate a Pathways (planning to accomplish goals) score; the two scores are then combined to generate an overall AHS score (Snyder et al., 1996).

Across NT, LD, and ASD groups, the mean pathway score was 26.93 (rounded to the nearest hundredth; unless otherwise indicated, all subsequent calculations were rounded to the nearest hundredth) out of a possible 32 and the mean agency score was 26.64 out of a possible 32. The overall mean AHS scores across all three groups was 53.62 out of a possible 64.

The overall mean for the NT respondent's AHS score was 56.50 out of a possible 84. The overall mean score for LD respondents was 55.47 and for ASD was 49.47 out of a possible 64. The neurotypical respondents scoring highest on the overall AHS mean score is not surprising and is reinforced by research regarding overall success rates of NT students as opposed to LD and ASD students (Costenbader & Janiga, 2002; Emery, 2009;

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Milmson & Hartley, 2005). The fact that LD mean scores were relatively close to those of the neurotypical respondents suggests a similar degree of hope and optimism among LD students. The ASD respondents scoring the lowest could be an indicator of the social and academic challenges that might present significant difficulties to this population as they attempt to navigate the complexities of post-secondary education. The mean scores reflect a combined perception of agency and pathway. In order to examine the results more fully, the means for the two subareas, pathway and agency, were disaggregated.

Four items were presented to measure pathway (planning to achieve goals) as perceived by the participants in this study. Analysis of the scores on the pathway revealed that NT students scored highest (27.55) followed by LD students (26.61) and then ASD students (25.47) out of a possible 32. The planning process requires practice and organizational skills that are sometimes deficient in those diagnosed with LD and ASD. The results of this analysis suggested that the students in this study perceived themselves similarly with regard to their ability to plan for achieving their goals.

The scores on the agency (goal directed energy) subset of the AHS revealed that NT students scored highest (27.60), followed by LD (27.33), and then ASD (24.67) out of a possible 32. No statistically significant differences in goal directed energy was found between the respondents. The scores of the ASD participants was only slightly lower (approximately 2 points) which suggests that all the participants felt similar levels of goal directed energy. The scores were relatively high, suggesting that students among all three groups reported high levels of goal directed energy. The similarity in scores may be related to the fact that these questions addressed energy as it pertains to goals and does not necessarily deal with specific academic and/or organizational skills

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Relative similarities in mean scores across the groups emerged to statements connected to pathways (see Figure 6). When responding to the statement, "I can think of many ways to get out of a jam," the responses were similar with NT respondents scoring 7.07, LD respondents scoring 6.47, and ASD respondents also scoring 6.47 (out of a possible 8). Another pathway related prompt stated, "There are lots of ways around any problem." Responses also reflected similar scores across the three groups with NT at 7.01, LD at 6.6, and ASD at 6.93 (out of a possible 8). A third statement read, "I can think of many ways to get the things in life that are most important to me;" NT respondents scored 8.8, LD respondents scored 6.87, and ASD respondents scored 6.27 (out of a possible 8). Based on the statement, "Even when others are discouraged, I know I can find a way to solve the problem," NT and LD scored an identical 6.67 but ASD fell almost a full point below at 5.8 (out of a possible 8). Although the first three aforementioned statements dealt with more general concepts and included the idea of thinking about solutions, the fourth question asked respondents to discuss their problem solving capabilities, especially in difficult situations. The ASD respondents appear to have less confidence in their actual problem-solving abilities than the other two groups.

As with the measures for pathway, only four items indicating agency were posed. In 3 of the 4 items involving agency, the students classified as ASD and LD perceived themselves similarly. Perceptions appeared positive though ASD students perceived themselves somewhat less optimistically than the other two groups to specific statements related to agency (see Figure 7). Students with LD presented with the highest mean for the statement, "I've been pretty successful in my life" with NT scoring 6.2, LD scoring 6.8, and ASD scoring 6.2 (out of a possible 8).

Responses that showed a discrepancy across groups emerged. One statement, for example, read "I energetically pursue my goals;" NT and LD mean scores were similar at 7.33 and 7.13, respectively but the mean for ASD was 6.4 (out of a possible 8). The modifier "energetically" may have been interpreted differently for students with ASD. Another statement read "My past experiences have prepared me for my future;" although NT (7.27) and LD (7.4) were similar, the mean ASD score was lower at 6.20 (out of a possible 8). Another statement from the AHS read, "I meet the goals that I set for myself." NT respondents scored highest at 6.8, followed by LD at 6.4, and ASD last at 5.87 (out of a possible 8). This statement asked for specific and concrete feedback regarding goal setting and LD/ASD Individuals responded with less confidence than their NT counterparts.

Findings of the AHS suggested that successful community college students categorized as NT, LD, or ASD generally perceived their organizational skills positively. As measured by the AHS, students in this study were generally positive about agency, that is, the ability to self-direct. The students classified as NT and LD had very similar scores. The students classified as ASD had slightly lowered perceptions, but nonetheless indicated that they had been successful in their lives.

Analysis of the HTS

Hanish Transition Survey (HTS)

A 4-point Likert-scale was used to measure the degree to which the participants perceived various concepts found on the survey. The statements on the survey are related to college success across a number of categories including social, communication, specific academic skills, self-advocacy, use of technology, and problem solving. The

respondent is asked to evaluate himself or herself on a scale from 0 ("not at all") up to 4 ("always"). All students responded to the first 21 questions. The last four questions pertained directly to student disability profiles and the use of disability services on community college campuses and answered only by students with LD or ASD. Neurotypical students recorded a score of 0 to 84 while LD and ASD students scored between 0 and 100. So that scores can be compared more accurately, the responses to the first 21 questions were compared across all three groups and the results of the LD and ASD questions around disability services were analyzed and discussed separately.

The mean score on the HTS across all three groups was 56.52 out of a possible 84. The mean scores by group are as follows: NT averaged a score of 55.0 while LD students scored 57.67, and ASD students averaged 57.20. The mean scores revealed no major differences across the three groups.

Similarities and differences with regard to specific responses across the groups emerged. NT students averaged 58, students with LD 49, and students with ASD 56 (out of a possible 84) when responding to a statement, "I come to class regularly even when I am tired." These results are encouraging as research-based literature reinforces the connection between attendance and overall post-secondary success (Crede, Roch, & Kieszczynka, 2010). Although students valued attendance in class, they reported that they are not taking advantage of additional services on the community college campuses (e.g., free tutoring services) with NT students scoring an average of 30, LD scoring 36, and ASD scoring 36 (out of 84 possible). Another area of commonality indicated that many demonstrate a similar, but relatively low, willingness to contact professors if experiencing difficulties with NT, LD, and ASD producing responses of 36, 37, and 37,

respectively (out of a possible 84). In a similar pattern, evidence suggests a reluctance to contact the instructor when experiencing difficulty connected to community college classes. All three groups reported relatively low levels of engagement with college advisement services with scores for NT, LD, and ASD of 24, 30, and 34, respectively (out of a possible 84). Given that these students have been successful, determining if little to no interaction with advisement or professor contact is detrimental to student success is challenging. Successful community college students may be choosing their own classes and bypassing advisement at the community college. Although the mean scores are relatively low, i.e., NT 33, LD 33, and ASD 26 (of a possible 84), when participants were asked if they use online resources to choose instructors, anecdotal evidence suggests that more students are choosing instructors through online resources like RateMyProfessor.com (a website that allows students to read reviews of college professors). Students using a website like RateMyProfessor.com might help to explain the lower levels of engagement with college advising services. An alternative explanation is that many of the students in this study, with the exception of the NT, were receiving support from Northbridge College Success Program. Nevertheless, the scores across the groups were similar. Finally, scores across all three groups (NT 20, LD 16, and ASD 12) indicated very low engagement with on-campus college activities like clubs. Traditionally, engagement with on-campus social activities has been believed to promote campus connection and, consequently, student success but these findings run counter to that supposition (Wolf-Wendel, Ward, & Kinzie, 2009). Trends were addressed through the interviews.

Figure 4 – Relative similarities on the HTS

Relative similarities on the HTS
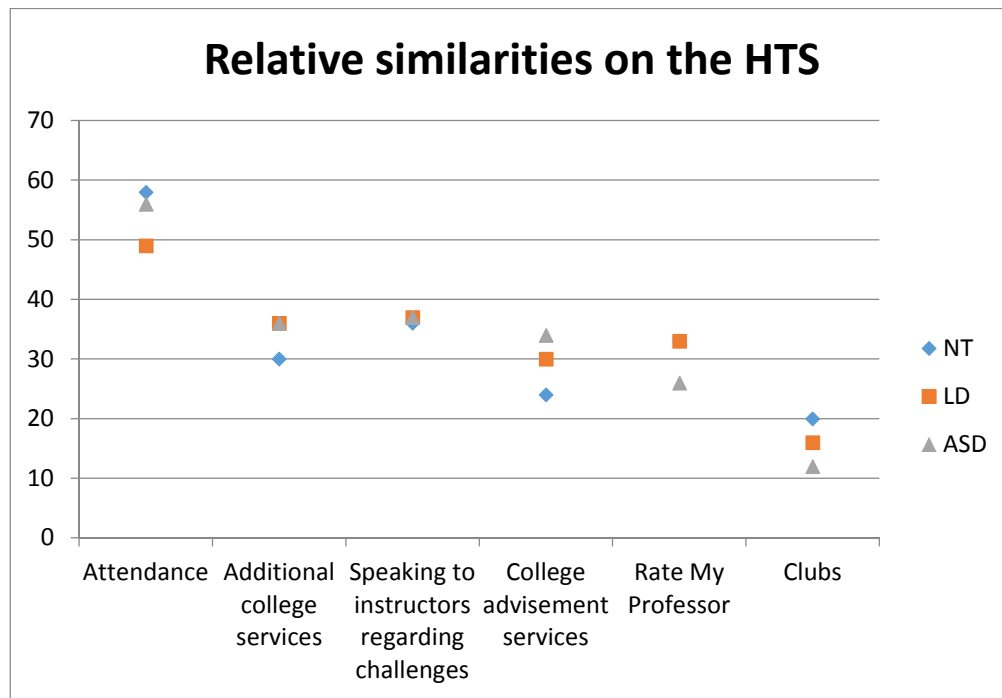
Scores on the HTS also revealed differences between the groups. One example is a question about social interaction with peers on college classes which asks, "I socially interact with my peers before or after class;" NT students' scores averaged 36 while LD students scored a 42, and ASD students a 24 (of a possible 84). Because of communication difficulties, it is not surprising that the ASD score is lower than the other two groups, but the fact that the LD score is higher could be an indicator of increased socialization connected to community college classes based on attendance. Another finding relates to use of social media. Despite some research indicating increased use of social media in connection with post-secondary success, little evidence suggested that the respondents of this survey are utilizing this technology; NT respondents averaged a score of 20, LD scored 29, and ASD scored 7 out of a potential 84 (Wall, 2011). A third trend suggested a general sense of optimism that college classes will help the students achieve

their goals as NT scored a 54, LD a 49, and ASD 43 (out of a potential 84). A discrepancy between the NT students who reported taking notes in class (54) more frequently than LD (43) or ASD (44) students was noted. This difference could be because the act of note taking is challenging or also that there is less direct instruction of note taking at the K-12 level. One prompt asked respondents if they looked forward to college classes and while NT and LD respondents' mean scores were the same (48), ASD respondents scored much lower averaging 35. It is possible that ASD students look forward to class less because of some of the social and communicative demands that face them while attending classes. Checking email is generally regarded to be an important part of college success as there is increased reliance on technology for communication. NT (50) and LD (48) scored higher than ASD (36) in this regard. It may be that because email represents a form of communication which may present challenges for ASD students, they are less likely to check the email. It might also be a tactic to avoid what might potentially be communication regarding challenges or difficulties in community college classes. Qualitative data was used to explore identified trends through the interview process.

Figure 5 – Relative differences on the HTS

Relative Differences on the HTS
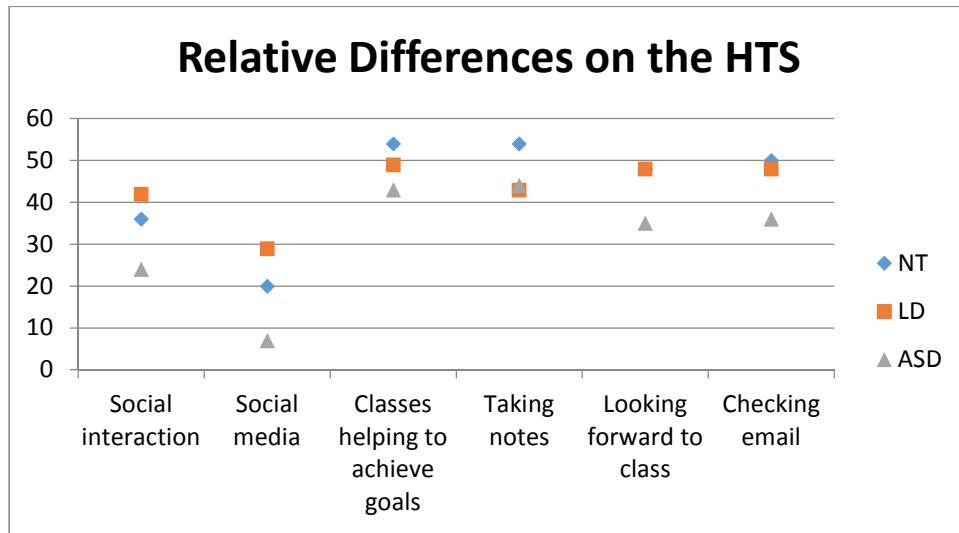
Analysis of Interviews

When analyzing the results of the interviews, several trends emerged. This analysis was conducted first across all 15 respondents, then on a group-by-group basis to try and determine similarities and differences between the three groups and finally, between individual respondents within the same groups.

In a sign of the changing and increasingly technological nature of post-secondary education, the 15 respondents produced similar responses to contacting professors and the communication modality they preferred. The 15 participants were asked, "Do you contact your professors for help if you are experiencing challenges? If so, how do you contact your professor? If not, why not?" All 15 responded that they contacted professors when experiencing challenges. When elaborating on their responses, 14 of the 15 participants indicated that they used email to contact professors. Regardless of the presence of a disability, email has been a tool for successful students to open and

maintain lines of communication with instructors. A number of advantages to email communication exist at the post-secondary level including, but not limited to, the ability to almost instantaneously send communication (not having to wait until the next class or office hours), the luxury of having the time to process communication and then respond, and the ability to avoid some of the challenges inherent in face-to-face interactions (reading bodily language, etc.). For both LD and ASD students, challenges with reading body language and quickly and effectively processing verbal information can make a face-to-face meeting much more difficult, and consequently stressful, than it might be for a NT student.

The responses to the question, "Describe your attendance at community college classes," reflected commonality across the majority of the 15 respondents. Thirteen of the 15 respondents explained that they consistently attended class, describing that they only missed one or two classes or calling their attendance "very good." Even the two respondents who shared that they missed a large number of classes went on to explain that they learned the importance of attendance when missing classes and improved over time. These responses connect with information from the quantitative surveys in that, overall, scores were relatively high when asked about attendance levels. In addition, these findings align with research that connects college success with attendance (Gump, 2005).

Students applied various strategies when asked how they chose classes and professors ("Describe how you choose classes and instructors"). Seven of the 15 participants responded that they used the website RateMyProfessor.com to research potential instructors before choosing classes and 6 out of 15 shared that they chose classes based on word of mouth recommendations. Additionally, four respondents shared

that they chose classes based on making the classes fit their schedules (i.e., not having classes on a Friday or having all classes in the afternoons). One other factor mentioned by two of the participants is that they utilized advisors to choose community college classes. This reinforces findings from the HTS which indicated low levels of engagement with community college advisement services. Like the increased use of email mentioned earlier, the use of RateMyProfessor.com illustrates how technology is becoming increasingly useful for successful students who have learned how to effectively navigate the community college experience. As a way to ask a follow-up question connected to the AHS Survey and the analysis of overall hope, a question based on the connection between community college classes and goals asked, "Will college classes help you achieve your goals? Why or why not?" Fourteen of the 15 participants responded in the affirmative and certain connections were noted more frequently among the responses. Six of the student shared that they felt college classes would help them with an eventual career while six mentioned that the individual classes were part of a process that would culminate in earning a degree. Four of the respondents mentioned that college classes had/would contribute to personal growth as well. A question based on if and how disability services on the college campus had/had not impacted the students, "Describe the role that disability services has played in your community college experience (if applicable)" resulted in 9 of the 15 students mentioning that disability services had played a part in their success at the community college level though the type of supports, the frequency, and way in which the interactions with DRS occurred were different among respondents.

Two of the interview questions were designed to probe how often respondents socially interacted with their peers as part of the community college ("Describe your interactions with peers before, during, and after community college classes") and whether students were taking part in organized social activities on the community college campus ("Describe your involvement in clubs and other activities on the community college campus"). Little commonality was found among the 15 respondents. A variety of responses ranged from those who were involved in multiple on-campus activities and clubs to those who reported no organized social connections at all.

Although the responses were consistent regarding the use of email, in-person contact with professors across the 15 respondents was not as consistent. Only 6 of the 15 total respondents discussed meeting with a professor; of those six, three mentioned meeting the professor in class or after class while the other three referenced speaking with a professor during scheduled office hours. The participants were asked to discuss if they used services that the community colleges offer to support students ("Do you use additional services that are offered by the college? [free tutoring for example]"). Only 6 of the 15 participants used additional services and even among those six, words like "one or two times" or responses that mentioned that the online academic support was only used occasionally for specific problematic classes. Responses suggest that successful students may not have a need for services or alternately that the students in this study were finding outside resources. Many community colleges provide support services for students, often free of charge, but they are not always used by the students for direct delivery.

With regard to specific study strategies, only 1 of the 15 responded that no study

strategy was used, seven of the participants directly stated or alluded to studying their notes, two mentioned note cards, and two referenced study guides. The majority of the participants indicated the use of note taking. Some described specific strategies while others mentioned the use of disability service note takers. Almost all (14 out of 15) of the successful community college students who took part in the interview reported taking notes.

When the coded interview responses were analyzed according to student groupings (NT, LD, and ASD), several trends emerged. Some similarities became evident across the different student profiles. When responding to the question about contacting professors, "Do you contact your professors for help if you are experiencing challenges? If so, how do you contact your professor?" All three of the groups described email as a preferred means of communication. Attendance was another area of commonality among the three groups. Four of five NT respondents described their attendance as a relative strength and the same percentage of LD and ASD respondents described their attendance in positive terms. Only two respondents (one NT and one LD) described challenges with attendance early in their community college experience but mentioned learning from those challenges and improving attendance significantly over time. Only one ASD respondent described having consistent attendance challenges. It is the experience of this student researcher that attendance is important for a number of reasons. First, attendance is a demonstration of seriousness and dedication to instructor. Attendance also improves the likelihood of being present when important information about class expectations and areas to study may not be apparent by simply reading the textbook. Many community college classes also offer credit for attendance which is a

relatively easy way for students to improve their grades. Some similarity in the responses

to the prompt "Describe how you choose classes and instructors" was found. Three of

the 10 NT and LD respondents reported using the website RateMyProfessor.com while 2

of the 5 ASD respondents shared using the same website. Additionally, one NT, two LD,

and one ASD student shared that they met with an advisor to choose classes and

instructors. Overall, the majority of the participants in each of the groups had some sort

of system for choosing classes and/or instructors. Having a strategic approach, regardless

of the specific tools utilized, represents a technique that may play a part in the success of

this group of community college students.

   A number of noteworthy differences emerged as the responses were analyzed

according to the learning profile groupings. Discrepancies between the responses on

social experiences connected to classes also appeared. Although many of the respondents

mentioned social interactions in various forms, the NT students described interactions

that were class related but also social. For example, one NT respondent shared that social

opportunities were available before class, but that in class conversation usually centered

on class requirements and conversation after class might involve making plans that were

both social (getting together for meals) and academic (setting up times for study groups).

Social involvement for NTs stands in contrast to the LD and ASD students who described

far more limited interactions that often only related to class information or were only with

familiar individual students. Socialization can be inherently challenging for ASD and LD

students who may be exerting additional effort to keep up with the academic rigor which

might limit their opportunities or inclination to engage in social interaction that is not

directly related to class. Another difference related to the method for contacting a

professor when experiencing challenges. As mentioned earlier, many of the respondents listed email as a preferred method of communication. However, all of the NT respondents also mentioned meeting with an instructor face to face either during office hours or in class. Only one LD and one ASD respondent, however, mentioned meeting with an instructor face to face. Email offers these students a chance to communicate with a professor without the stresses of interpersonal interaction. Face-to-face interaction may afford NT students the opportunity to build additional rapport and the professor may be able to put a face with a name which could offer potential benefits for the NT student as the class progresses. Email has lowered some communication barriers but might also cause some LD and ASD students to miss out on an opportunity to improve their interpersonal communication skills that might be critical in future job opportunities like an in-person interview or a meeting with a supervisor.

Preparation for assessments and note taking, the two prompts that dealt with specific academic skills, revealed another difference among the groups. Although all of the respondents but one ASD student described that they had some sort of strategy for studying and note taking, stark differences were seen between the specificity of the responses. When asked about preparing for assessments, the NT participants used descriptive words like "flashcards," "practice tests," and "cheat sheets;" they also referenced studying with others, using study guides, and managing time effectively to allow for an adequate amount of preparation time. The responses for the LD and ASD students were markedly different. Though students diagnosed with LD/ASD also responded affirmatively to studying in preparation for assessment, little specificity was indicated. Words like "study," "review," and "look over" were used more frequently.

Additionally, 3 of 5 LD and 1 of 5 ASD respondents referenced rereading required class materials. A similar trend was noted with regard to note taking. NT responses included words like "highlighting," "Cornell notes," "codes," and "bullet points." Two ASD respondents described the technology they used to take the notes and three LD respondents shared that they tried to write everything down but these are descriptions of the note taking process as opposed to specific strategies for actually taking the notes and describing how the notes are most efficiently organized. Overall, two LD and two ASD students used negative descriptors to describe their note taking whereas only one NT student was negative about note taking but mentioned that notetaking improved over time. The difference in these descriptors has implications because, in a general sense, an impression exists that the LD and ASD group have less well defined strategies for studying than the NT group. The same is true for note taking as the NT respondents appear to utilize specific note taking strategies which does not appear to be the case for the other two groups. This result is important because K-12 schools do not tend to specifically teach study or note taking skills as part of a typical curriculum.

One other difference among the groups was evidenced by diversity of responses to a prompt that asked if students felt the community college classes would help them achieve their goals. Even though a majority of the responses were in the affirmative, the NT group referenced classes being helpful for both career and academic goals. This stands in contrast to the LD group in that only one respondent mentioned the future and one other mentioned an impact on an eventual career. Two other LD students mentioned that the classes would help to earn a degree. This represents a slightly more shortsighted view of the importance of community college. Three of the ASD respondents shared that

the classes would be helpful in a future career which might indicate that these students

are a little more forward thinking as they evaluate the importance of their community

college classes. Ideally, students would see short-term value (GPA, degree completion)

and longer-term value (personal, academic, and career development).

Implications for Education

Increasing numbers of students classified as needing special education services

are attending community colleges and universities. Many are not enjoying success rates

comparable to their NT peers. The results of this study have implications for increasing

the success rates of students in post-secondary settings at the secondary schools,

institutions of higher education, and positive impact for students and their families.

The first implication is for secondary schools. In preparing students for a number

of different post-secondary options, one of which is community college, the results of this

study can provide valuable information to K-12 schools who are, ostensibly, preparing

students for post-secondary education experiences. Preparation for college should begin

in earnest in secondary schools. The results of this study suggest that successful students

are more empowered self-advocates who are able to use a variety of modalities to

communicate with their college instructors and individualize the class and instructor

selection process. Also, these students attend classes and feel a sense of optimism

regarding their future. By analyzing successful community college students across three

distinct groupings (NT, LD, and ASD), it is possible to draw some conclusions regarding

factors that may increase the chances for successful outcomes at the post-secondary level.

Based on this preliminary research, a number of specific areas could be addressed

effectively at the K-12 level as elementary and secondary schools prepare students for

post-secondary education.

The concept of self-advocacy is one that K-12 schools could devote additional time and resources toward developing. Students who have developed self-advocacy skills are more likely to be able to seek out support appropriately when needed (Peters, 2011). This ability is critical at the community college level because parent involvement decreases dramatically. Perhaps secondary schools or institutions of higher education could develop curriculum and/or interventions that are directly tied to building self-advocacy. The Individualized Education Plan (IEP), which exists only up through high school graduation or aging out of eligibility for special services, presents a unique opportunity to encourage self-advocacy among students with disabilities. By using student-led IEPS and encouraging student involvement in the IEP process, potential exists for students with disabilities to develop the type of self-advocacy skills that could also be applied in a post-secondary education setting. Specifically, this process could help the student accurately describe his or her disability, academic and social limitations, as well as areas of strength. Consequently, this strategy could be applied when interacting with college professors and/or applying for disability services on a college campus.

Although the overall emphasis on building specific academic skills as a preparation strategy for post-secondary education did not appear to be a critical factor in student success as it pertains to this study, two specific areas analyzed that could increase the chances for students to succeed at the community college level emerged. Helping students develop specific skills in the areas of (1) note taking and (2) overall study strategies to prepare for college level assessments appear to be beneficial activities for students planning on pursuing post-secondary education. Rather than simply expecting

students to learn to take notes and to study effectively simply through practice, best-practice and research-based training for students at the secondary level in the areas of note taking and overall study strategies seem to be areas that should be stressed in the secondary curriculum or transition programs.

Transition programs could familiarize students with the process of signing up for classes and share information regarding valuable resources like RateMyProfessor.com. The capacity to build a positive and productive rapport with instructors could be encouraged and developed at the K-12 level by helping students develop this type of rapport with, for example, high school instructors. Workshops could provide students with specific explanations of potential pitfalls as well as success strategies for post-secondary education.

Based on the significant number of students who use email to contact college professors, K-12 schools could consider specific training in email etiquette and working to prepare students to compose effectively formatted electronic correspondence. As email usage increases, K-12 schools could encourage email communication between students and staff as a way to educate students how to most effectively use this communication technique. Additionally, K-12 schools could begin to include online aspects of classes as a way to prepare students for the increased growth of online classes at the post-secondary level (Cedja, 2010).

The second implication is for institutions of higher education. Additionally, the findings of this study should be of interest to post-secondary educational leaders who can analyze the results to possibly make changes that could increase success rates for LD and ASD community college students. The results of this study may also be of interest to

community college administrators who are likely seeking to increase the enrollment and retention rates for students with LD and ASD in addition to all students in general.

The MCCCD offers a class called CPD 150 – Creating College Success; the course is an introduction to college and covers a wide variety of subjects including topics that align with the results of this study and characterize successful students (Maricopa Community Colleges – CPD 150, 1997). A class like this designed with the goal of improving retention and graduation rates aligns with the findings of this study. This course could be made a requirement for all degrees and certificates. Other similar classes could be developed that do not necessarily address traditional academic subjects but help to prepare students for the overall challenges of post-secondary education. A more robust series of these college readiness classes could be created and although the initial class could be a requirement for all, other classes could be used as an intervention for struggling students or recommended to certain students at the time of enrollment. Classes could even be designed for students of specific learning profiles like LD or ASD.

Arizona State University (ASU) offered a class called SPE 394: Autism Spectrum Disorders Higher Education, which was designed for individuals diagnosed with ASD and covered a variety of subjects that could help students successfully navigate the transition from high school to college (Adams, 2013). Based on the findings of this study, some of the topics for these classes could include an explanation of all of the free support systems that are available on campus. Sharing information about these programs in conjunction with an onsite campus tour, for example, could provide concrete practice with the process of setting up an appointment. Another example is to allow students to take part in a trial session to be more comfortable with what free tutoring, for example,

entails. Other stops on this tour could include the advisement offices with face-to-face meetings with advisors and the process could be repeated for disability services offices. Another useful topic to be addressed is the process of establishing and maintaining a positive and productive rapport with college instructors and how that process may differ from the high school experience.

The third implication is for parents and students. The results should be of interest to parents of, and the NT, LD, and ASD students themselves. Awareness of factors that can promote community college success might encourage parents and students to seek out the supports necessary to build the requisite skills and strategies. Parents of LD and ASD students, in addition to parents of NT students, may find the results of this study useful. A research-based connection exists between parent expectations and the outcomes after high school graduation (Doren, Gau, & Lindstrom, 2012). Additionally, many parents have misconceptions regarding their children's potential to be successful at the post-secondary level. If parents could be better informed regarding the realities of the community college experience including the potential challenges as well as the advantages for students who are LD and/or ASD, overall success rates could be improved. The findings of this study indicated that goal setting was an area of challenge for LD and ASD students, which is a process that could be taught and reinforced by parents. In addition, continued work and development on communication skills can be guided and reinforced by parents who may want to invest in additional supports if they feel the K-12 schools are not able to provide adequate supports. Although self-advocacy training could happen in a structured way at K-12 schools, additional training is also a process that could be reinforced in the home by parents. Finally, the information could be

empowering to students themselves and improve overall hope with regard to postsecondary success. For example, some sort of database, website, or even a free online class that provided information directly to students might be a valuable source of information for students preparing for the challenges of post-secondary education. One of the findings of this study is that overall success may not necessarily be tied to specific academic ability. In fact, there are a number of other factors that influence success at the community college and this message could be a powerful one for LD and ASD students.

Limitations of the Study

A number of limitations deserve consideration with regard to this study. First, the sample size is relatively small. Although surveying 45 total students for the quantitative aspect and then a subset of 15 of those students to take part in the qualitative interviews provided useful results, increasing the sample size makes sense. Due to the small sample, the results of this study should be interpreted as an initial exploration of the perceptions of a small number of highly selective individuals. The majority of individuals with disabilities in this study were receiving outside tutorial support. Additionally, the participants were from a relatively small geographic area (greater Phoenix metro area) which does not allow for comparison to other geographic areas. Even within the greater Phoenix metro areas, the students surveyed only attended 5 of the total 12 Maricopa County Community Colleges. A larger sample size from a variety of geographical locations would add to the body of research.

Another limiting factor is a lack of information about the participants. Although gender, age, and community college information was provided, knowing additional demographic information about the participants would have been informative. For

example, type of curriculum provided by their secondary school, the type and degree of internal and external academic support before and during the community college experience, and employment history information could be beneficial. Many of the students considered atypical engaged services which were costly suggesting that these students came from homes that were relatively affluent which may have influenced their perceptions. Thus, investigating socioeconomic status could provide useful information.

Information related to the identification of the overall GPA of the students, how many classes the students successfully completed, the number of classes the students took each semester, and how many classes students failed or withdrew from would have been additional useful information to build a knowledge base about these populations relative to community college success. Comparing responses on the surveys and interviews between groups of unsuccessful community college students with successful community college student would be informative, providing valuable insight into which factors were most closely tied to success.

The majority of students who participated in the same private support service program also had a working relationship with the interviewer. This connection offered the chance to recruit community college students who have been classified as LD or ASD as those are two of the student populations that were supported, but may have impacted the responses of the students. In addition, the college support program offers both social and academic support to students. Attendance in this program might be part of their overall community college success and could have influenced their responses to certain questions. For example, 3 of 5 respondents classified as LD mentioned using the website RateMyProfessor to evaluate instructors before taking a class but of the ASD students,

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only 1 of 5 respondents mentioned this resource. The practice of consulting RateMyProfessor is encouraged by staff at NorthBridge, but perhaps this approach is more commonly used by most successful students as 3 of 5 NT respondents also reported using the site and these students were not receiving any support from the private program.

Future Research

A number of ways that the post-secondary outcomes for all students can be explored include steps that can be taken that could then be used to improve the enrollment, retention, and graduation statistics for students who are classified as LD or ASD. Future research can be built by addressing some of the limitations of this study. Larger sample sizes in combination with increasingly specific demographic data would increase the literature base for understanding the strengths and needs of atypical students at the community college. Additionally, future research could include unsuccessful students so that more clearly defined contrasts could be drawn between successful and unsuccessful students. The qualities of successful students contrasted with the challenges faced by unsuccessful students could paint a clearer picture of the barriers to success and how some successful students are navigating those barriers. In addition, following the students for a longer period of time to see if they maintain a successful status and are able to successfully graduate would be informative as well as analyzing the length of time to graduation.

Further research could analyze the current programs and interventions being used by K-12 schools to prepare students of a variety of learning profiles for post-secondary education. Analysis of the successes and challenges of these existing programs could

inform adaptations and improvements of existing programs and/or the creation of new programs which could better prepare students for the challenges of postsecondary education.

Examining the existing systems of support at the community college level could provide valuable information, specifically the role that disability services plays in supporting students of diverse learning profiles. Because disability services are present on every community college, they are logical partners in the success of students and future research could determine the effectiveness of current support systems and possibly offer insights into ways for these offices to improve retention and graduation for students. A detailed analysis of the community college classes that serve as an introduction for students could reinforce the effectiveness of these classes and offer insight into how these classes could be improved and additional courses that might be offered designed to improve transition outcomes.

Another area of future research could focus on the dissemination of relevant information for students and parents. By investigating how information regarding successful transition strategies gets to parents and to students, recommendations could be made for more effective ways to make sure that information regarding research-based strategies ends up in the hands of those who need it the most, the parents and students.

CHAPTER 5

SUMMARY AND CONCLUSIONS

This study was based on the following research questions:

Research Question 1: Will perception of agency differ for students with ASD, LD, and typical students enrolled in the community college system?

Hypothesis 1: Community college students classified as ASD will have the lowest perception of agency and typical students the highest with the perception of students with LD falling midway between the two populations.

Null Hypothesis 1: Perception of agency will not differ for students with ASD, LD, and typical students enrolled in the community college system.

Research Question 2: Will perception of agency be related to the performance of students with ASD, LD, and typical students enrolled in the community college system?

Hypothesis 2: Perception of agency will be significantly related to the performance of students with ASD, LD, or typical students enrolled in the community college system with students with ASD with the lowest perception of agency and typical students the highest with the perception of students with LD falling midway between the other two populations.

Null Hypothesis 2: Perception of agency will not be related to the performance of students with ASD, LD, and typical students enrolled in the community college system.

Research question 3: Will targeted behaviors differ for students with ASD, LD, and typical students enrolled in the community college system?

Hypothesis 3: Targeted behaviors will differ for students with ASD, LD, and typical students enrolled in the community college system with students diagnosed with ASD having the lowest level and typical students the highest with the level of targeted behaviors with LD falling midway between the two.

Null Hypothesis 3: Targeted behaviors will not differ for students with ASD, LD, and typical students enrolled in the community college system.

Research Question 4: Will there be a relationship between targeted behaviors and academic performance of students with ASD, LD, and typical students enrolled in the community college system?

Hypothesis 4: Targeted behaviors will be significantly related to the performance of students with ASD, LD, and typical students enrolled in the community college system with students diagnosed with ASD achieving the lowest level of

performance in the community college system and typical students the highest with students with LD falling midway between the two populations.

Null Hypothesis 4: There is no relationship between targeted behaviors and academic performance of students with ASD, LD, and typical students enrolled in the community college system.

The answers to research questions 1 – 4 were negative thus, supporting the null hypotheses. The measures employed in this dissertation did not reveal major differences between the three populations of successful community college students. This finding provides support for the argument that successful students, regardless of label, essentially employ the same strategies. These identified strategies have the potential for powerful influence when used to develop secondary and post-secondary curriculum for all students, but especially for those with special needs, e.g., LD and ASD populations.

This study seeks to add to literature focused on improving the success rates for post-secondary achievement for students diagnosed as LD or ASD. Initially, 45 students (15 NT, 15 LD. and 15 ASD) completed the AHS as a way to gather statistical information regarding agency (goal directed energy) and pathway (planning to accomplish goals) scores as well as an overall hope measure for the three groups. The same 45 students completed the HTS which measured specific behaviors related to post-secondary success. These results of these two quantitative assessments were analyzed and used to generate questions for a qualitative interview that included questions on a variety of strategies and skills associated with success at the post-secondary level. The interviews were conducted

with five participants randomly chosen from the three previously mentioned groups of 15. The results of the interviews were coded and analyzed in order to identify trends. The results of both the quantitative and qualitative portions of the study were assessed and generated the following findings when applied to NT, ASD, and LD individuals classified as successful at the community college level:

- did not actively engage with on-campus resources including, but not limited to, free tutoring, clubs, and other social activities and disability services offices.
- are generally hopeful about the college experience with the NT students being the most hopeful followed by LD and then ASD.
- used self-advocacy skills in conjunction with generating and implementing effective strategies to contact instructors and to strategically select classes and instructors at the postsecondary level.
- employed specific academic skills like note taking and strategic preparation for assessments
- found email is an effective communication method to contact instructors.

These findings are important as community colleges need to improve their success rates for all students and specifically for students classified as LD and/or ASD. K-12 school and community colleges can enhance their existing programs to improve retention and graduation rates for students across a variety of learning profiles.

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APPENDIX A

ADULT HOPE SCALE

Directions:

Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided.

1. = Definitely False

2. = Mostly False

3. = Somewhat False

4. = Slightly False

5. = Slightly True

6. = Somewhat True

7. = Mostly True

8. = Definitely True

___ 1. I can think of many ways to get out of a jam.

___ 2. I energetically pursue my goals.

___ 3. I feel tired most of the time.

___ 4. There are lots of ways around any problem.

___ 5. I am easily downed in an argument.

___ 6. I can think of many ways to get the things in life that are important to
       me.

___ 7. I worry about my health.

___ 8. Even when others get discouraged, I know I can find a way to solve
       the problem.

___ 9. My past experiences have prepared me well for my future.

___10. I've been pretty successful in life.

___11. I usually find myself worrying about something.

___12. I meet the goals that I set for myself.

Note.

When administering the scale, it is called The Future Scale. The agency subscale score is derived by summing items 2, 9, 10, and 12; the pathway subscale score is derived by adding items 1, 4, 6, and 8. The total Hope Scale score is derived by summing the four agency and the four pathway items

APPENDIX B

TARGETED BEHAVIORS ADAPTED FROM HANISH TRANSITION SURVEY

(2010)

1. I socially interact with peers before or after class.

 Not at all   Very little   when I need to   most of the time

    1   2   3   4

2. I seek help from my teacher when I need to understand the homework or class

   material.

 Not at all   Very little   when I need to   most of the time

    1   2   3   4

3. I come to class regularly even when I am tired.

   Not at all   Very little   when I need to   most of the time

      1   2   3   4

4. I participate during class discussions.

   Not at all   Very little   when I need to   most of the time

      1   2   3   4

5. I use social media (e.g. Facebook) to contact others regarding assignments.

   Not at all   Very little   when I need to   most of the time

      1   2   3   4

6. I am prepared with all materials when I come to class.

   Not at all   Very little   when I need to   most of the time

      1   2   3   4

7. I check my email for messages from the instructor.

   Not at all   Very little   when I need to   most of the time

1	2	3	4

8. I think the classes will help me achieve my goals.

Not at all	Very little	when I need to	most of the time
1	2	3	4

9. I prepare for tests.

Not at all	Very little	when I need to	most of the time
1	2	3	4

10. I consistently submit homework and class work on time.

Not at all	Very little	when I need to	most of the time
1	2	3	4

11. I use any extra services (e.g. on-campus tutoring) if I need help.

Not at all	Very little	when I need to	most of the time
1	2	3	4

12. I speak to the instructor to discuss any problems or challenges in the classroom.

Not at all	Very little	when I need to	most of the time
1	2	3	4

13. I take notes in my classes.

Not at all	Very little	when I need to	most of the time
1	2	3	4

14. I ask other students in the class for help with assignments.

Not at all	Very little	when I need to	most of the time
1	2	3	4

15. I study every day.

 Not at all   Very little   when I need to   most of the time

    1   2   3   4

16. I contact the instructor by phone or e-mail to discuss the class or assignments

   for clarification.

 Not at all   Very little   when I need to   most of the time

    1   2   3   4

17. I look forward to going to class.

 Not at all   Very little   when I need to   most of the time

    1   2   3   4

18. I use e-mail to communicate with my instructor

 Not at all   Very little   when I need to   most of the time

    1   2   3   4

19. I use college advisement services to select classes

 Not at all   Very little   when I need to   most of the time

    1   2   3   4

 20. I use a selection tool like "Rate My Professors" to choose instructors

 Not at all   Very little   when I need to   most of the time

    1   2   3   4

 21. I am in involved in activities on the community college campus (e.g. clubs)

 Not at all   Very little   when I need to   most of the time

| 1 | 2 | 3 | 4 |

If you had an IEP during high school, please answer the following:

1. I have submitted my accommodations form from the DRC to the instructor.

Not at all	Very little	when I need to	most of the time
1	2	3	4

2. I take advantage of accommodations provided by the instructor and the DRC.

Not at all	Very little	when I need to	most of the time
1	2	3	4

3. I have contacted a counselor at the DRC for assistance

Not at all	Very little	when I need to	most of the time
1	2	3	4

4. I can accurately describe my disability

Not at all	Very little	when I need to	most of the time
1	2	3	4

APPENDIX C

EMAIL TO PROSPECTIVE PARTICIPANTS

68 Dear Community College Student,

My name is Simon Crawford and I am a doctoral student at Arizona State University. For my dissertation, I am asking people to complete a short online survey. Results will be kept completely anonymous and by completing the survey you will automatically be entered into a drawing for a $50.00 Visa gift card that will be randomly chosen. Please enter a valid email address when prompted while completing the survey as I will be emailing the winner once all surveys have been completed. If you have any questions or concerns regarding this project in general or the survey specifically, please let me know.

Thank you for your support.

Sincerely,

Simon Crawford