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## A Qualitative Study Investigating Post-Secondary Services for Students with Learning Disabilities at Saudi Universities

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A QUALITATIVE STUDY INVESTIGATING POST-SECONDARY SERVICES  
FOR STUDENTS WITH LEARNING DISABILITIES AT SAUDI UNIVERSITIES

by

Nahed Mohammed Binbakhit

A dissertation submitted to the Graduate College  
in partial fulfillment of the requirements  
for the degree of Doctor of Education  
Special Education and Literacy Studies  
Western Michigan University  
April 2020

Doctoral Committee:

Dr. Elizabeth Whitten, Ph.D., Chair  
Dr. Luchara Wallace, Ph.D.  
Dr. Wanda Hadley, Ph.D.

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# A QUALITATIVE STUDY INVESTIGATING POST-SECONDARY SERVICES FOR STUDENTS WITH LEARNING DISABILITIES AT SAUDI UNIVERSITIES

Nahed Mohammed Binbakhit, Ed.D.

Western Michigan University, 2020

This qualitative study explored the challenges and obstacles confronting students with learning disabilities who receive assistance from support service centers at Saudi Arabia universities. It also addressed the strategies and skills that students used to overcome these challenges and reviewed the recommendations for the further development of support services.

The study was conducted in support services centers at two Saudi public universities in Saudi Arabia (Riyadh). The participants were five female students with learning disabilities and five female staff members at the support services centers. The study used a semi-structured, face-to-face in-depth interview process to gather information.

Participants addressed several challenges confronting students with LD, including: (a) pre-university challenges, (b) academic challenges, and (c) social and emotional challenges. According to the participants, there are numerous supports students with LD received and strategies they used to overcome the challenges that confronted them. These include accommodations and academic support, social and emotional support, strategies and skills, and factors that enhanced the success of students with LD. To improve the services provided through the support services center, participants offered several suggestions, including: (a) awareness, (b) transition and online documentation system, (c) teamwork and diagnostic services, and (d) support sessions, workshops, and vocational training.

## DEDICATION

I dedicate this dissertation to the soul of my grandmother Tarfah, who passed away three years ago; she was always there for me with her love and prayers. I dedicate it to my mother, father, and son, who have all been incredibly patient with and supportive of me throughout my degree program. Finally, I dedicate it to the special education field and to all students with learning disabilities.

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Nahed Mohammed Binbakhit

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## CHAPTER I

### INTRODUCTION

The government of Saudi Arabia (S.A.) has made significant efforts in the area of education, which is an essential factor in preparing future generations. These efforts include providing an appropriate educational environment and curriculum for students in special education (Almousa, 2010). Students with disabilities have been receiving support in all areas of their lives, including higher education (Alwabli & Binomran, 2018).

In S.A., the Disability Code and the Regulations of Special Education Programs and Institutes (RSEPI) guarantee the rights of all individuals with disabilities to receive a free, appropriate education and any related services they need (Aldabas, 2015; Alquraini 2011). These laws were established almost a decade ago, yet they are still not implemented consistently for students with disabilities (Alhoshan, 2009; Alnahdi, 2014; Alquriani, 2014). Moreover, even with the increase in the availability of special education services for students with LD in higher education, the quality of these services has not significantly improved, and the implementation of these laws in higher education is still in development (Alnahdi, 2014; Alquraini, 2014).

The Ministry of Higher Education established in 1975 has the responsibility to plan and supervise Saudi universities (Ministry of Higher Education, 2019). There are 33 universities in S.A. (Smith & Abouammoh, 2013) and in 2017, the number of students with disabilities at Saudi universities was 175,391 (Ministry of Higher Education, 2019). Most of the Saudi universities provide support services for some students with disabilities such as physical disabilities, visual impairments, hearing impairments, and learning disabilities through on-campus support services

centers (Althuwabi, 2009; Alwabli, 2001). However, even with the existence of these support services, the outcomes related to these services do not always provide the support needed. Students with disabilities have been addressing problems and obstacles related to the provided accommodations and services during their post-secondary education, such as academic difficulties, communication issues with faculty, staff members and classmates at the university, limited number of specialists at the support center, lack of assistive technology and insufficient services (Alkhashrami, 2008; Althuwabi, 2009; Arafah & Mohammed, 2015; Alwabli & Binomran, 2018).

While there are some quantitative research studies focusing on students with LD in higher education in S.A., there are only a few qualitative studies, and most of them focused on students with physical disabilities, hearing impairments, or visual impairments, or they focused on faculty attitudes toward support services at the universities (Alrashed, 2017; Althuwabi, 2009). Due to the scarcity in qualitative studies on students with LD in higher education (Alhossein, 2014; Althuwabi, 2009), the present study will investigate the experiences of students with LD who attend Saudi universities and receive support services in order to explore the challenges confronting them, discovering strategies they use to overcome those challenges and reviewing the recommendations to improve the services at the support services centers.

### **History of U.S. Legislation Impacting Students with Disabilities**

Saudi Arabia has been focusing on the development and improvement of special education programs to assist individuals with disabilities, including students with learning disabilities. The essential government support and the endeavors of the general administration of special education services have contributed to substantial development in the field of special education in S.A. (Abdallah & Abdullah, 2018; Alnaim, 2015; Bin Battal, 2016). As a part of



these efforts, the Saudi government has declared several regulations and laws to protect and support individuals with disabilities from the time they first enter the education system until they graduate from university. These are (a) the Legislation of Disability, (b) the Disability Code, and (c) the Regulations of Special Education Programs and Institutes (RSEPI). These regulations and laws are largely based on laws from other countries that protect individuals with disabilities, such as the Individuals with Disabilities Education Act (IDEA) in the United States (U.S.) (Alquraini, 2011).

Since Saudi laws have been modeled on U.S. laws that support individuals with disabilities, it is fundamental to provide a brief description of those laws. They are: (a) the Elementary and Secondary Education Act of 1965 (ESEA), (b) Section 504 of the Rehabilitation Act of 1973, (c) Public Law 94-142: the Education for All Handicapped Children Act of 1975, (d) the Americans with Disabilities Act of 1990 (ADA), (e) the No Child Left Behind Act of 2001 (NCLB), (f) the Individuals with Disabilities Education Act (IDEA 2004), and (g) the Every Student Succeeds Act (ESSA, passed in 2015). Table 1 provides brief descriptions of these significant laws that support individuals with disabilities in the U.S.

The Elementary and Secondary Education Act 1965 (ESEA) aims to provide equal opportunity for all students. ESEA requires schools to meet high standards and improve the quality of elementary and secondary education. ESEA also requires schools to provide annual data about student achievement and progress (Cortiella & Horowitz, 2014).

**Table 1***Brief Descriptions of Significant U.S. Laws that Support Individuals with Disabilities*

Law	Year	Key points
Elementary and Secondary Education Act (ESEA)	1965	Provides equal opportunity for all students. Improves the quality of elementary and secondary education by requiring schools to meet high standards.
Section 504 of the Rehabilitation Act	1973	Guarantees basic civil rights for disabled individuals of all ages by protecting them from discrimination based on their disability. Section 504 categorizes disabilities, explains those categories, defines the eligibility criteria for services, and requires the provision of accommodations.  Covers all aspects of living and working. To qualify for services under 504, students must have a disability that limits their access to and participation in school. Their disabilities do not necessarily need to be one of the 13 disability groups described in IDEA. Applies to both public and private schools as well as colleges and universities.
Public Law 94-142: Education for All Handicapped Children Act	1975	Guarantees equality in the identification, placement, and discipline of students with disabilities. The four purposes of this law are: 1) to ensure that all children with disabilities have a “free appropriate public education,” 2) to assure the rights of children with disabilities and their parents, 3) to form a process through state and domestic educational agencies that may be held responsible for providing educational services for all children with disabilities, and 4) to evaluate the effectiveness of efforts to educate children with disabilities.
Americans with Disabilities Act (ADA)	1990	Provides broad civil rights protections to all individuals with disabilities and ensures that they have equal opportunity in public and private schools. Covers discrimination in employment, public services, transportation, telecommunication, and public accommodations, such as building accessibility.

Table 1—Continued

Law	Year	Key points
No Child Left Behind Act (NCLB)	2001	Serves all students in public education through high school(K–12). Guarantees equal levels of education for students with disabilities. Focuses on qualified teachers.
Individuals with Disabilities Education Act (IDEA)	2004	<p>Supports children with disabilities from birth to age 21 by providing special education and related services to assist them in school, work, and independent living.</p> <p>Provides federal funding to states and school districts to help cover the cost of special services. Mandates that teachers be highly qualified. Includes early intervention, transition plans as part of students' IEPs and starts at age 14. Covers three additional disabilities: Autism, traumatic brain injury, and ADHD. Requires students to participate in state testing requirements. Provides a new identification system, Response to intervention (RTI).</p> <p>IDEA has six principles: (1) zero reject, (2) nondiscriminatory evaluation, (3) appropriate education, (4) least restrictive environment (LRE), (5) procedural due process, and (6) parent and student participation.</p>
The Every Student Succeeds Act (ESSA).	2015	<p>Replaces ESEA.</p> <p>Includes elements to help ensure success for students and schools. Provides a flexible framework for states to plan their own goals for student achievement. Requires all students to be taught in line with high academic standards. Students with IEPs or 504 plans can receive accommodation for all annual state tests. Requires states to involve and seek out input from parents and families.</p>

*Note:* From the (U.S. Department of Education, 2005; the U.S. Department of Education, 2018).

Section 504 of the Rehabilitation Act 1973 was established to protect individuals with disabilities of all ages from discrimination or segregation based on their disability. Section 504 of the Rehabilitation Act 1973 offers protection for any individual within an educational learning environment who has been identified as an individual with a physical disability, hearing, visual, speech impairment, health problem or learning disability (U.S. Department of Health and Human Services, 2008).

Public Law 94-142: The Education of All Handicapped Children Act of 1975 guarantees equality in the identification, placement, and discipline of students with disabilities (U.S. Department of Education, 2005). The four purposes of this law are: (a) to ensure that all children with disabilities have a Free Appropriate Public Education (FAPE), (b) to assure the rights of children with disabilities and their parents, (c) to form a process through state and domestic educational agencies that may be held responsible for providing educational services for all children with disabilities, and (d) to assess and guarantee the effectiveness of efforts to educate all children with disabilities (U.S. Department of Education, 2005).

The Americans with Disabilities Act (ADA) became law in 1990 (ADA National Network, 2019). The ADA provides broad civil rights protections to individuals with disabilities, and it ensures they have equal opportunity across education, employment, public services, public accommodations, transportation, and State and local government services and telecommunications (U.S. Department of Justice, 2005). For instance, eligible college students who have current documentation of LD and request learning or testing accommodations should receive academic accommodations that are required by law (Learning Disabilities Association of America, 2014).

The recent version of the Elementary and Secondary Education Act (ESEA) is the No Child Left Behind Act of 2001 (NCLB). This federal law serves students in public education through high school, and it is a significant law for students with LD. NCLB guarantees that students with LD receive equal levels of education (National Center for Learning Disabilities, 2019).

The Individuals with Disabilities Education Act 2004 (IDEA) is a federal law that supports children with disabilities receiving special education and related services. Children with

disabilities from birth through age two and their families receive early intervention services under IDEA part C, and part B ensures children and youth ages three through 21 receive special education and related services. IDEA ensures that students with disabilities receive free appropriate public education. IDEA supports students during school, work, and independent living (U.S. Department of Education, 2018).

Every Student Succeeds Act (ESSA) of 2015 was a reauthorization of the Elementary and Secondary Education Act (ESEA) and No Child Left Behind (NCLB). The Obama administration recognized that NCLB's prescriptive requirements became increasingly unworkable for schools and educators. ESSA includes elements that help to ensure success for students and schools. For example, the law advances equity by protecting America's disadvantaged and high-need students and by requiring all students to be taught to high academic standards (U.S. Department of Education, 2017).

### **History of Saudi Legislation Impacting Students with Disabilities**

Saudi Arabia began to address the needs of individuals with disabilities much later than the United States. Currently, there are three laws specifically supporting the needs of individuals with disabilities living in S.A. Table 2 provides a brief description of these significant laws and regulations.

Saudi Arabia passed the first legislation (Legislation of Disability) addressing equal rights for individuals with disabilities in 1987. This law includes several parts: (a) definitions of disabilities, (b) programs for prevention and intervention, and (c) processes of evaluation to establish eligibility for special education services. Moreover, the Legislation of Disability 1987 ensures that public organizations offer extended and needed services such as rehabilitation services, training programs, and job training (Alquraini, 2011).

**Table 2**

*Summary of Significant Laws Supporting Individuals with Disabilities in S.A.*

Law	Year	Key points
Legislation of Disability	1987	First legislation established for individuals with disabilities to ensure equal opportunities in the community.  Includes descriptions of disabilities, programs for prevention and intervention, and processes to determine eligibility for special education services.
Disability Code	2000	Guarantees the rights of individuals with disabilities by providing access to free and “appropriate medical, psychological, social, educational, and rehabilitation services through public agencies.”
Regulations of Special Education Programs and Institutes (RSEPI)	2001	First regulation for students with disabilities.  Describes the rights and regulations for students with disabilities.  Provides information about the main categories of students with disabilities such as students with intellectual disabilities, visual and hearing impairments, learning disabilities, and multiple disabilities.  Describes the procedures for assessing and evaluating students with disabilities, requires individual education program (IEP), and defines school responsibilities toward students with disabilities.

*Note:* From Alnahdi, 2014; Alquraini, 2014, and Alquraini, 2011).

In 2000, the Saudi government established the Disability Code to guarantee the rights of people with disabilities. The Disability Code provides access to free and “appropriate medical, psychological, social, educational, and rehabilitation services through public agencies.” Further, the Disability Code supports the rights of all individuals with disabilities to obtain free, sufficient, and convenient services in several areas such as health, education, training and rehabilitation and employment (Alquraini, 2014; Alnahdi, 2014). The Disability Code includes 16 articles that provide information about the protocol and rights of individuals with disabilities (Abdallah & Abdullah, 2018; Prince Salman Center for Disability Research, 2004).

In 2001, the Special Education Department in S.A. and the Special Education Department at King Saud University worked together to create the Regulations of Special Education Programs and Institutes (RSEPI) for students with disabilities. RSEPI was based on the special education policies of the U.S., particularly the Individuals with Disabilities Education Act (IDEA, 1990) (Aldabas, 2015; Alquraini, 2013).

RSEPI is the first regulation for students with disabilities. RSEPI does not define the specific age of the individuals that should be eligible for the special education service. It describes the rights and regulations for students with disabilities, and it provides information about the main categories of students with disabilities, such as intellectual disabilities, visual and hearing impairments, learning disabilities, and multiple disabilities. In addition, RSEPI describes the procedures for assessing and evaluating students with disabilities, individual education programs (IEP), and defines the responsibility of schools toward students with disabilities (Alquraini, 2011). These legislative measures work to ensure that individuals with disabilities receive full protection against any segregation or discrimination and that they receive a free and appropriate education (Alnahdi, 2014; Alqurini, 2014).

### **Percentage of Persons with Learning Disabilities in S.A.**

Throughout Saudi Arabia, students with disabilities in all grades are a growing population (Elsheikh & Alqurashi, 2013). According to the General Authority for Statistics in S.A. (2017), 12.9% of the population in S.A. has a disability. The most widespread category among those with disabilities is students with learning disabilities (LD). Students classified with LD represent 46% of the entire school-age (K-12) disability population (Aljadid, 2013; Central Department of Statistics and Information Population and Vital Statistics, 2011). According to Alodaib and Alsedairy (2014), there are more than 300,000 students with LD attending public

schools in S.A. Many of these students continue their education at the university level. In higher education, in 2017 the number of students with disabilities was 175,391. The information covered students with physical disabilities, hearing and visual impairments, communication and understanding disorders, and memory and concentration problems (see Table 3). However, there is no specific category for students with LD (General Authority for Statistics in S.A., 2017).

**Table 3**

*Number of Students with Disabilities in Higher Education in S.A.*

Type of disability	Number of students
Physical disabilities	39,608
Visual imperilment	107,124
Hearing impairment	11,914
Communication & understanding disorders	11,471
Memory& concentration problems	5,274
Total	175,391

*Note:* From the General Authority for Statistics in S.A., 2017.

Some studies identified the percentage of students with LD in Saudi universities in a few regions. For example, the percentage of students with LD is 3% of 590 students at Al-Taif University at Teachers' College in the West region (Alharithi, 2009). In the East region, Aldeeb (2000) conducted a study on a sample of 500 students at King Faisal University and found the percentage of students with LD was 12% of 500 students. Further, Mu'ajini (2009) pointed out the percentage of students with LD in 29 Saudi universities was 1.08% of 525,149 students (Ministry of Education, 2009).

It is difficult to determine the number of students with an LD in higher education in S.A. for several reasons: (a) a lack of diagnostic tools to identify LD at the undergraduate level, (b) many academics and researchers in the field of education and psychology are reluctant to accept the concept of LD (Alharithi, 2013), (c) some students never disclose their disability, and (d) students may not be aware or realize they have a learning disability (Alharithi, 2013;



Alkhashrami, 2008; Almousa, 1999).

Due to these reasons, S.A. has begun to exert more efforts to advocate for students in need of special education, especially in the area of LD. For instance, support services for students with LD in primary and secondary schools began in 1996 (Almusa, 1999). The S.A. government made a concerted effort to provide support and services for individuals with disabilities. This effort has generated an appropriate educational environment for the development of special education services all over S.A. (Almousa, 2010; Alnahdi, 2014; Alnahdi, Saloviita, & Elhadi, 2019).

A current challenge is that support services for students with LD in general education are not subsequently offered at advanced levels, such as in S.A. universities (Althuwabi, 2009). As such, there are very few programs for students with LD in S.A. universities. The experience of Saudi universities in delivering support services for postsecondary students with LD is limited, and the delivery of such services has started in only a few universities (Althuwabi, 2009; Alwabli, 2001). In addition, while universities provide services for students with visual and physical impairments, students with other disabilities that are more difficult to diagnose receive limited if any services. These disabilities include learning disabilities, attention deficit and hyperactivity disorder, and emotional and behavioral disorders. When these or other hidden disabilities do not receive the appropriate support, the result is often withdrawal from the university (Alharithi, 2013; Althuwabi, 2009; Alwabli, 2001).

Thus, the opportunity for students with LD to reach their goal of receiving a bachelor's degree is limited because of the scarcity of support services (Althuwabi, 2009; Alwabli, 2017). In addition, students with disabilities in general, and students with LD in particular, face new and different challenges in higher education. For instance, Hadley (2007) stated that "Moving on to

higher education means achieving a new level of responsibility and independence, especially for students with learning disabilities” (p. 10). According to Alwabli and Binomran (2018), students with disabilities including students with LD have been facing some problems and obstacles related to the provided accommodations and services during their post-secondary education. Therefore, despite the significant efforts of the Saudi government and the Ministry of Education, there is still a need to ensure these services are sufficient and available to meet students’ needs (Alkhashrami, 2008; Arafah & Mohammed, 2015).

This study delves into the experiences of students with LD who attended Saudi universities that recently began providing support services for students with LD. It explores the challenges confronting these students at postsecondary education level from the students with LD and staff who work at support services centers at two Saudi universities, it reveals the strategies they used to overcome these challenges, and their recommendations to improve the support services at S.A. universities.

### **Problem Statement**

The Saudi Disability Code and RSEPI ensure that students with disabilities get full protection against discrimination and receive a free and appropriate education and support services (Aldabas, 2015; Alquraini, 2011). However, while these laws were approved almost a decade ago, in reality, they are not applied reliably and uniformly to students with disabilities (Alhoshan, 2009; Alquraini, 2014; Alnahdi, 2014). The scarcity of effective implementation has created a gap between the structure of these laws and the delivery of services. This causes shortages of special education services for some students with disabilities, such as students with learning disabilities or attention disorders and hyperactivity in higher education level (Alquraini, 2014; Alnahdi, 2014).

Even with the efforts in providing support services on some university campuses, the quality of these services has not improved and the outcomes related to these services have remained the same. In higher education, the implementation of these laws is still in development and students with disabilities confront some problems and obstacles related to these services (Alnahdi, 2014; Alquraini, 2014; Alwabli & Binbomran, 2018).

Empirical data and research about disability in S.A. are limited, creating a demand for research about special education in Saudi Arabia (Alkhashrami, 2008; Aljadid, 2013; Arafah & Mohammed, 2015; Altamimi, Lee, Sayed-Ahmed, & Kassem, 2015). Few studies have focused on students with learning disabilities in higher education in S.A. (Alrashed, 2017; Althuwabi, 2009). In both English and Arabic databases, a thorough search was conducted in peer-reviewed journal articles, Ph.D. dissertations, and master's theses focusing on the experience of students with learning disabilities in higher education. However, most of those studies concentrated on students with physical disabilities and hearing and visual impairments or the studies focused on faculty attitudes toward support services at the universities (Alhoshan, 2009; Althuwabi, 2009). Moreover, the few studies found used a quantitative approach. Their results are summarized in Table 4.

Only one quantitative study titled “the nature of supporting services and facilities provided to female students with disabilities at King Saud University and their obstacles from their perspectives” included three students with LD. The findings showed that students with disabilities were satisfied with the services provided; they confronted some problems and obstacles related to the offered accommodations and services (Alwabli & Binomran, 2018).

**Table 4**

*Studies by Saudi Researchers on Students with Disabilities and Support Services at Universities in Saudi Arabia*

Title	Year	Type of publication	Type of method	Author
A study to investigate the nature of the facilities, support services, and special programs that should be provided by higher education institutions for students with disabilities from faculty members' perspectives.	2001	Journal of special education and rehabilitation	Quantitative	Alwabli, A.
A study at King Saud university investigating the need for support programs for students with learning disabilities at the college level.	2009	Master's thesis	Quantitative	Althuwabi, M.
Evaluation of support services for students with disabilities at King Saud University.	2008	A study presented at the 8th meeting of the Gulf Disability Association	Quantitative	Alkhashrami, S.
Evaluation support services for students with disabilities at Almajmaah University.	2015	<i>Journal of Educational Sciences</i>	Quantitative	Arafah, A., & Mohammed, A.
Study to investigate IT services for students with disabilities (visual impairment) at King Abdulaziz University.	2010	A study of the Area of Availability and Quality	Quantitative	Jawhari, A.
The problems faced by students with special needs at Taif University.	2010	<i>Journal of Education College</i>	Quantitative	Alayeed, W., Abdullah, J., Osofur, Q., & Thabeti, A.

Table 4—Continued

Title	Year	Type of publication	Type of method	Author
Educational services and support for students with learning disabilities at the university level.	2017	<i>Journal of Scientific Research in Education</i>	Qualitative	Alrashed, G.
The nature of the services center for individuals with disabilities at the University of Imam Muhammad bin Saud al-Islami from principals' and students' perspectives.	2011	<i>Journal of Humanities and Social Sciences</i>	Quantitative	Alduwaish, A.
Postsecondary outcomes of students with visual and auditory impairments in Saudi Arabia: Implications for special education policy.	2009	Doctoral dissertation		Alhoshan, H.
Nature of Supporting Services and Facilities Provided to Female Students with Disabilities at King Saud University and Their Obstacles from Their Perspectives	2018	Journal of Special Education and Rehabilitation	Quantitative	Alwabli, A. & Binomran, N.

According to Alhanoo (2016), the use of the qualitative research method in Arab countries, including Saudi Arabia show only a few studies used a qualitative research method. Alhossein (2014) and Althuwabi (2009) highlighted the need for studies to use qualitative research methods to explore the perspectives of college students with LD toward support services and what struggles they face at the post-secondary level. There is a significant gap in research related to students with LD in higher education level, and not much is known about the challenges and obstacles students with LD face and how they overcome these challenges at the

tertiary level. There are no qualitative studies to date that specifically investigated the experience of students with LD, their needs, struggles, and strategies used to overcome these obstacles while receiving support services in S.A. universities. Thus, it is crucial to conduct more research about such students and the services they need because these services are likely to have a positive impact on those students' academic achievement and on their attitudes toward future jobs (Althuwabi, 2009; Alwabli & Binomran, 2018).

Because of limited research studies, specifically qualitative research, on this population, this qualitative study gathers in-depth information about the students with a learning disability, what they face along their college pathway, and how they deal with those challenges. This study examines the challenges that students with LD encounter at the post-secondary level and the strategies they use to overcome these challenges from the perspectives of students with LD and the staff at the support services centers. It will hopefully open the door for more exploration, research, and fill a gap in the literature in the areas of learning disabilities and post-secondary education level.

Conducting qualitative data collection, such as interviews, can offer more knowledge and provide rich data about the needs of students with learning disabilities in higher education. A qualitative study, specifically a phenomenological inquiry, appears to be a sustainable alternative to explore challenges, strategies, and suggestions not previously considered in studies of students with learning disabilities. This research will be beneficial to the support services staff who help students with learning disabilities at S.A. universities. Higher education administrators responsible for student retention policies, rules, and programs may also benefit from this study. Most significantly, the stories shared by the participants of this study will give a voice to other

students with learning disabilities who are on similar pathways and help to encourage and inspire them.

### **Purpose Statement and Research Questions**

The purpose of this qualitative phenomenological study was to explore challenges and obstacles confronting students with LD who receive assistance from support service centers at S.A. universities. In addition, the study took a closer look at the strategies and skills students used to overcome these challenges, and reviewed their recommendations and suggestions for developing such services. The study used an in-depth interview process to gather information from the perspective of students with LD and staff who work at support services centers at two S.A. universities.

This study focused on three research questions:

- RQ1. What are the challenges students with LD face at the beginning and during postsecondary education?
- RQ 2. What strategies and skills did the support services staff and students with LD find effective in overcoming challenges during postsecondary education?
- RQ3. What do students with LD and support staff recommend and suggest to improve post-secondary services?

### **Significance of the Study**

There is has been little documentation and research done to investigate the experiences of students with learning disabilities who utilize support services at Saudi universities. Findings of previous quantitative studies found that students with disabilities faced some problems and obstacles while receiving support services at Saudi universities (Althuwabi, 2009; Arafah & Mohammed, 2015; Alwabli & Binomran, 2018; Jawhari, 2015; Alkhashrami, 2008).

Thus, there is a need to conduct a qualitative study to investigate the problems and obstacles confronting students with LD at the higher education level. This study aimed to investigate: 1) challenges confronting students with learning disabilities at two Saudi universities, 2) explore strategies and skills they use to overcome these challenges, and 3) to review their recommendations and suggestions for developing such services.

The finding of this study may provide an overview of the services and accommodation provided for students with LD at two Saudi universities. The information acquired through this study will be beneficial for support centers to document the effectiveness of the services they provide, to learn from the strategies the students and professionals use, and to plan for and develop additional services for students with LD in higher education. Furthermore, the findings may enhance awareness of the importance of these services, and how these services would positively impact the academic performance of students with LD and other aspects of their lives.

The results may assist Saudi special education administrators in higher education to revise the policies and restructure the services to provide adequate and sufficient support for students with LD. These findings could also provide important information about the special education services provided to students with LD before they enter higher education, such as elementary and secondary levels.

The provided information from this study may assist in the professional development of special education counselors, academic advisors, faculty members, university administrators, and leaders. Such professional development may include strategies for implementing appropriate academic accommodations and services to students with LD in higher education. The findings of this study may assist special education counselors and administrators to focus on providing



courses or services for students with LD before enrolling at the universities that would facilitate a smoother academic journey for students with LD at S.A. universities.

### **Definition of Terms**

#### **Support Services Center:**

A center that provides educational and psychological services to assist students with disabilities to achieve the maximum degree of effectiveness in meeting the requirements of the programs presented as well as developing their capacity to rely on themselves (King Saud University, 2013).

#### **Disability Services Office:**

An office located on the campus that is a source of support for students with disabilities... services that may be available include: advocating for student rights; individual and group counseling designed for academic support for students with disabilities; study skills courses; tutors; counseling designed to address managing stress; assessment centers; and assistive technology (Simpson & Spencer, 2009, p. 741).

#### **Learning Disability:**

A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. It includes conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Specific learning disability does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of cognitive impairment or emotional impairment, of autism spectrum disorder, or of

environmental, cultural, or economic disadvantage (Michigan Department of Education, 2019, pp. 36–37).

**Procedural Definition of a Student with Learning Disabilities:**

A student who shows a low academic performance in one or more subjects. The general education teacher who notices this weakness refers the student for diagnosis that allows him/her to receive special education services. The cause of LD is not related to mental disability or other disabilities (Ministry of Education, 2017).

**Strategies:**

Refers to any teaching or learning technique that supports students with learning disabilities in post-secondary level, such as peer tutoring, study aids, and learning strategy instruction, such as study skills and note-taking skills (Kim & Aquino, 2017).

**Learning Strategies:**

The pupil uses skills and abilities to acquire and internalize knowledge easily, quickly and efficiently and get an apprenticeship to master certain competences, such as study skills, concentration techniques...retention and memorization (storage) of information techniques and application techniques (Pino Juste & Rodríguez López, 2010, p. 259).

**Organization of the Dissertation**

This study is divided into five chapters. Following the introduction, the next four chapters include: Chapter II contains a review of relevant literature about students with learning disabilities in higher education. Chapter III presents the study's methodological design, including information about the participants, setting, measurement instruments, procedures, and data analysis. Chapter IV presents the results of the investigation, and Chapter V contains a

discussion of the findings, conclusions related to the research questions, implications for practice, and limitations and recommendations for future research.

### **Summary**

The purpose of this chapter was to state the background of the research problem and the percentage of learning disabilities, as well as present the problem statement, the purpose, the significance of the study, and definitions of terms. The chapter concluded with an outline of the organization of this dissertation.

## CHAPTER II

### LITERATURE REVIEW

In the past few decades, Saudi Arabia has witnessed a substantial improvement in the field of special education. There has been an increase in the number of programs and in the quality of services for students with LD. New laws and policies have had an enormous impact on the provision of services for students with LD (Aldabas, 2015). This literature review will provide background for a study that investigates the challenges that students with LD at Saudi universities face and how they might overcome these challenges. This chapter will first discuss the definitions of LD, the prevalence of learning disabilities in the U.S. and S.A., relevant legislation in the U.S. and S.A., a comparison of the legislation in the U.S. and S.A., and transition to post-secondary education. The researcher will also discuss post-secondary education support services for students with LD in the U.S. and S.A. Next, this chapter will present the challenges students with LD address and strategies used to assist them in overcoming these challenges. Finally, the present the limitations of the current literature will be addressed.

#### **Definition of Learning Disabilities**

Several definitions of learning disabilities are used in the U.S. These definitions, which cover multiple specific learning disorders related to reading, writing, and math, include rich details and complete descriptions of individuals with learning disabilities (Hardie & Tilly, 2012). For instance, the Michigan Administrative Rules for Special Education (MARSE) defined Specific Learning Disability (SLD) as follows:

a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Specific learning disability does not include learning problems that are primarily the result of visual, hearing, or motor disabilities, of cognitive impairment, or emotional impairment, of autism spectrum disorder, or of environmental, cultural, or economic disadvantage. (Michigan Department of Education, 2019, pp. 36-37)

In comparison, the Ministry of Education (2017) provides two definitions of LD. The first defined the concept of LD as:

A disorder in one or more of the basic psychological processes which include understanding and using written and spoken language, that appear in the disorders of listening, thinking, speech, reading, writing, dictation, expression, and mathematics, which do not refer to reasons related to mental, auditory, or other disabilities, or conditions of learning or family care. (p. 19)

The second definition of LD is procedural:

There is an obvious academic weakness of the student's learning skills, which cause him/her inability to keep pace with peers in academic achievement regardless of disabilities. Additionally, a student with learning disabilities is described as a student who shows a low academic performance in one or more subjects. The general education teacher who had noticed this weakness refers to the student for diagnosis that allows

him/her to receive special education services. The cause of LD is not related to mental disability or other disabilities. (p. 19)

The U.S. and S.A. definitions of learning disabilities are very similar. Both describe learning disabilities as a disorder in one of the basic psychological processes (Alnaim, 2015). Both definitions also mention LD involves using and understanding language and that LD affects academic areas such as reading, writing, and mathematics. The U.S. and S.A. definition exclude other causes that could contribute to learning disabilities, such as cognitive impairment, hearing or visual impairment, or cultural and environmental factors.

### **Prevalence of Learning Disabilities in the U.S. and S.A.**

Throughout the world, there is an increase in the number of students with special needs and specifically in the number of higher education students who identify as having LD. For instance, the U.S. has seen an increase in the number of college students with disabilities and students who identify as having LD (Barnard-Brak, Lechtenberger, & Lan, 2010; Madaus, Banerjee, & Merchant, 2011; Pryor, Hurtado, Saenz, Santos, & Korn, 2007; Shecter-Lerner, Lipka, & Khouri, 2019; U.S. Department of Education, 2005; Weis, Speridakos, & Ludwig, 2014). According to Cortiella and Horowitz (2017), in 2014, 67% of young adults with LD were enrolled in some sort of postsecondary education.

Similarly, S.A. has seen an increase in the number of students with LD in general and higher education (Alharithi, 2009). Students classified with LD represent 46% of the entire school-age (K-12) disability population (Aljadid, 2013; Central Department of Statistics and Information Population and Vital Statistics, 2011). According to Alodaib and Alsedairy (2014), more than 300,000 students in S.A. public schools have LD. Ewain et al. (2017) found the prevalence of students with LD was considered high in elementary schools in S.A. The

percentage of the students with LD including dyslexia (reading disability) and dysgraphia (writing disability) was 23.89%. According to Alharithi (2009), the learning disabilities phenomenon will continue to expand until the process of diagnosis becomes more precise and more research on the definition of academic learning disabilities and best practices for evaluating LD in higher education has been determined. According to the General Authority for Statistics in S.A. (2017), in higher education, in 2017 the number of students with disabilities was 175,391. The information covered students with physical disabilities, hearing and visual impairments, communication and understanding disorders, and memory and concentration problems. However, there is no specific category for students with LD.

For this reason, there is a lack of well-founded data on learning disability issues offering credible scientific information about the field (Algain & Alabdulwahab, 2002). According to Mu'ajini, Al-Thabeti, Al-Khuraiji, Al-Qaddoumi, and Huwaidi (2009) and Alsunbul (2016), studies and research focusing on students with disabilities in higher education are scarce in Arab and other Gulf countries. However, the number of students with LD in S.A. and other gulf nations continues to increase in all grades from elementary school through higher education (Mu'ajini et al., 2009). Elsheikh and Alqurashi (2013) emphasized principals and educators should consider creating database systems that include information on all disabilities for all regions of S.A., including details such as diagnoses, impacts of the disabilities, educational, emotional, social, and recreational requirements and recommendations. Further, they recommended that research institutions have access to these database systems to further the understanding of students with learning disabilities and how to best serve them (Elsheikh & Alqurashi, 2013).

## **U.S. Laws Relating to Students with Learning Disabilities**

In the U.S., laws have supported students with LD at all education levels. For over 50 years, for example, the Elementary and Secondary Education Act (ESEA) of 1965 was a federal law that aimed to provide equal opportunity for all students, including students with disabilities. ESEA required schools to meet high standards for the quality of elementary and secondary education. ESEA also required schools to provide annual documentation of student achievement and progress (Cortiella & Horowitz, 2014; U.S. Department of Education, 2017). The next version of the Elementary and Secondary Education Act (ESEA) was The No Child Left Behind Act of 2001 (NCLB). NCLB was a federal law that served students in public education through high school in the U.S.. NCLB guaranteed that students with LD would receive equal levels of education (National Center for Learning Disabilities, 2019).

In 1973, the U.S. Congress passed Section 504 of the Rehabilitation Act, a federal law designed to protect individuals with disabilities from discrimination or segregation based on their disability. It offers protection for any individual within an educational learning environment who has been identified as having a physical disability, hearing, visual, speech impairment, health problem, or learning disability (U.S. Department of Health and Human Services, 2008).

The Americans with Disabilities Act (ADA) became law in 1990 (ADA National Network, 2019). The ADA provides broad civil rights protections to individuals with disabilities and ensures they have equal opportunities in the areas of education, employment, public services, public accommodations, transportation, state and local government services, and telecommunications (U.S. Department of Education, 2017). Under this act, eligible college students with LD who have current documentation of their LD and request learning or testing



accommodations should receive the academic accommodations required by the law (Learning Disabilities Association of America, 2014).

Public Law 94-142: The Education for All Handicapped Children Act was passed in 1975 with the goal of guaranteeing equality in the identification, placement, and discipline of students with disabilities (U.S. Department of Education, 2005). The four purposes of Public Law 94-142 included: (a) to assure that all children with disabilities would have a Free Appropriate Public Education (FAPE); (b) to assure protected rights of children with disabilities and their parents; (c) to initiate a process by which state and local educational agencies may be held in charge for offering educational services for all children with disabilities; and (d) to assess and assure the effectiveness of efforts to educate all children with disabilities (U.S. Department of Education, 2005). Since 1990, this law has been enacted as the Individuals with Disabilities Education Act (IDEA). IDEA is a federal law that supports children with special needs, so they can receive the special education and related services they need for school, work, and to live independently (Michigan Department of Education, 2018). IDEA has six principles including (a) zero reject, (b) nondiscriminatory evaluation, (c) appropriate education, (d) least restrictive environment (LRE), (e) procedural due process, and (f) parent and student participation (Learning Seed, 2010).

IDEA requires a student with a disability receive a unique individualized education program (IEP). The IEP should include the student's strengths, parent concerns, current evaluation report, level of academic achievement and functional performance, eligibility, and educational requirements of the student. The IEP team is required to include the following members: parents, regular and special education teachers, a school district representative, an evaluation representative, and whenever appropriate, the student with the disability (Lipkin & Okamoto, 2015; Michigan Department of Education, 2018). The IEP must document transition

services requirements by the time the student turns 16, and the IEP team must plan appropriate transition services for the student (U.S. Department of Education, 2017). The National Center on Secondary Education and Transition (2017) defined transition services as:

A coordinated set of activities that may address, among others, the assessment, planning process, and educational and community experiences for youth with disabilities as they turn 14. The intent of transition is to create opportunities for youth with disabilities that result in positive adult outcomes.

According to the *Transition Guide to Postsecondary Education and Employment for Students and Youth with Disabilities* (U.S. Department of Education, 2017), the IEP transition services plan must include:

1. appropriate measurable postsecondary goals based upon age-appropriate transition assessments related to training, education, employment, and, where appropriate, independent living skills; and
2. the transition services (including courses of study) needed to assist the student with a disability in reaching those goals.

The IEP should ensure the student has an equal opportunity to study in an appropriate learning environment, known as a Least Restrictive Environment (LRE). IDEA requires that individuals with disabilities are educated together with individuals without disabilities to the maximum extent appropriate. The LRE requires any adjustment of the environment that allows children to receive a general education. Students should have access to same-age peers without disabilities and schools are responsible for providing needed resources and services in the public education setting (Yell & Christle, 2017).

Under IDEA, students’ parents and guardians must have the opportunity to collaborate with schools in designing and implementing special education services. The IDEA’s section on parent and student participation in decision-making describes the school's roles in ensuring parent participation and involvement in the special education process. These include evaluation, development, review, and revision of the IEP; educational placement decisions; decisions about what data will be collected during assessment; review of evaluation data; and transition services starting by age 14 (Yell & Christle, 2017).

The Every Student Succeeds Act (ESSA) of 2015 was a reauthorization of the ESEA and NCLB. The Obama administration recognized that NCLB's prescriptive requirements had become increasingly unworkable for schools and educators. ESSA includes elements designed to help ensure success for students and schools. For example, the law advances equity by protecting students who are disadvantaged and in high-need and requires all students be taught to high academic standards (U.S. Department of Education, 2017). Table 5 provides a brief summary of significant laws that support individuals with disabilities in the U.S.

**Table 5**

*Significant Laws Supporting Individuals with Disabilities in the U.S.*

Law	Year	Key points
The Elementary and Secondary Education Act (ESEA)	1965	Provides equal opportunity for all students.  Requires schools to meet high standards and improve the quality of elementary and secondary education.

Table 5—Continued

Law	Year	Key points
Section 504 of the Rehabilitation Act	1973	<p>Guarantees basic civil rights to individuals with disabilities of all ages. Protects them from any discrimination based on their disability. Section 504 has the disability categorizes, explains the disability category and eligibility criteria for services, and requires the provision of accommodations.</p> <p>Covers all aspects of living and working. To be qualified for services under 504 students must have a disability limits access and participation in school, this disability is not necessarily one of those 13 disability groups that are described in IDEA'04. Applies to public, private schools, college and universities.</p>
Public Law 94-142: The Education for All Handicapped Children Act	1975	<p>Guarantees equality in the identification, placement, and discipline of students with disabilities. The four purposes of this law are: (a) to ensure that all children with disabilities have a Free Appropriate Public Education, (b) to assure the rights of children with disabilities and their parents, (c) to form a process through state and domestic educational agencies that may be held responsible for providing educational services for all children with disabilities, and (d) to evaluate the effectiveness of efforts to educate all children with disabilities.</p>
The Americans with Disabilities Act (ADA)	1990	<p>Provides broad civil rights protections to all individuals with disabilities, and ensures they have equal opportunity in education public and private schools, covers employment discrimination, public services, transportation, telecommunication, and public accommodations, such as acceptability building issues.</p>
The No Child Left Behind Act (NCLB)	2001	<p>Serves all students in public education through high school (K-12). Guarantees equal levels of education for students with LD. NCLB focuses on qualified teachers.</p>

Table 5—Continued

Law	Year	Key points
The Individuals with Disabilities Education Act (IDEA)	2004	<p>Supports children with disabilities from birth to 21 to receive special education and related services to assist them in school, work, and living independently.</p> <p>Provides funding to state and school districts to help cover the cost of special services. Teachers needed to be highly qualified. Includes early intervention, transition plan as part of students' IEPs, and starts at age 14. Includes three disabilities: Autism, traumatic brain injury, and ADHD. Requires students to participate in state testing requirements. Provides new identification system which is Response to intervention (RTI).</p> <p>IDEA has six principles including (a) zero reject, (b) nondiscriminatory evaluation, (c) appropriate education, (d) least restrictive environment (LRE), (e) procedural due process, and (f) parent and student participation.</p>
The Every Student Succeeds Act (ESSA).	2015	<p>Replaced ESEA and NCLB.</p> <p>Includes elements that help to ensure success for students and schools. Provides a flexible framework for states to plan their own goals for students' achievements within that federal framework. Requires all students to be taught to high academic standards. Students with IEPs or 504 plans can receive accommodations on all annual state tests. Requires states to involve parents and families and get their inputs.</p>

Sources: From the National Center for Learning Disabilities, 2019; U.S. Department of Education, 2017.

### **S.A. Laws Relating to Students with Learning Disabilities**

Like the U.S., S.A. has laws related to educating students with LD. Most recently, government support and initiatives of the General Administration of Special Education have contributed to substantial development in the special education field (Abdallah & Abdullah, 2018; Bin Battal, 2016). As a result of these improvements, the Saudi government has enacted several regulations and laws to protect and support individuals with disabilities. These policies

are largely based on U.S. laws protecting individuals with disabilities, such as the 2004 IDEA (Alquraini, 2011).

In 1987, the Disability Legislation was the first legislation to guarantee people with disabilities in Saudi Arabia receive equal opportunities in the community. It included several parts: description of disabilities, programs for prevention and intervention, and processes of evaluation to make eligibility decisions for special education services. Disability Legislation ensures that public associations offer extended services, such as rehabilitation services and job training, that prepare people with disabilities to live independently (Alquraini, 2011).

In 2000, the Disability Code was established to guarantee the rights of individuals with disabilities and to provide access to free and appropriate medical, psychological, social, educational, and rehabilitation services through public agencies. The Disability Code includes 16 articles (see Table 5) addressing protocol and the rights of individuals with disabilities (Abdallah & Abdullah, 2018; Almousa, 2010; Prince Salman Center for Disability Research, 2004).

In 2001, the Special Education Department in the Ministry of Education cooperated with agencies including the Special Education Department at King Saud University to form the Regulations of Special Education Programs and Institutes (RSEPI) for students with disabilities in S.A. (Aldabas, 2015; Alquraini, 2013). The RSEPI was closely aligned with the U.S. special education policies, including the 1990 IDEA.

RSEPI is the first law to directly address the needs of students with disabilities. It describes the rights of and regulations for students with disabilities and defines major categories of disabilities, including intellectual disabilities, visual and hearing impairments, learning disabilities, and multiple disabilities. RSEPI describes procedures for the assessment and evaluation of students with disabilities and for the design of individual education programs (IEP)

and defines school responsibilities to students with disabilities (Alquraini, 2011). Part Five of the RSEPI discusses transition services for students with disabilities and guarantees that transition services be provided as part of a student's IEP in the early stage (Alquraini, 2013).

Transition services refers to a group of comprehensive activities designed to prepare students to move from one level to the next, or from school life to general life, so they can be independent and self-supporting. The goal of transition programs is to prepare students with LD to transfer smoothly through different school stages or from high school to the post-secondary level or to a work environment (Alqahtani, 2017). There are two types of transition programs: (a) transition programs before and during the three academic stages, which provide basic skills for transitions, including learning communication skills and learning to engage in activities such as field trips and starting new friendships, and (b) transition programs enabling students to continue educational and vocational programs after high school. These programs focus on improving social and communication skills, developing decision-making skills to make appropriate choices, and learning about new lifestyles (Alqahtani, 2017).

The Disability Code and RSEPI focus on equality, education, and all aspects of life. These laws focus on all ages of individuals with special needs. They ensure individuals' rights to obtain appropriate and free education, health, rehabilitation, social services, and job training, and they provide protection from all types of discrimination (Alquraini, 2013; Alhoshan, 2009). Moreover, the Disability Code requires free medical, social, educational, and vocational services be provided for individuals with special needs. Students with LD can receive free educational services at the preschool, elementary, high school, and higher education levels. These services must be appropriate, adequate, and cover all essentials, and must include continuous evaluation

of curricula and services provided (Alodaib & Alsedairy, 2014). Tables 6 and 7 provide summaries of the Disability Code articles and the RSEPI parts.

**Table 6**

*Summary of Disability Code Articles*

Law	Disability Code
Article 1	Describes and defines terms.
Article 2	Includes governmental guarantee of welfare, prevention, healthcare, education, training, and habilitation services, employment, social participation, and sports facilities for persons with disabilities.
Article 3	Includes coordination of the Supreme Council with the authority to enforce regulations for architectural specifications required to provide easy access for movement and transportation for persons with disabilities.
Article 4	Includes coordination of the Supreme Council with authority to provide manpower for education and training - nationally and internationally - in the field of disability and to promote experience exchange with other countries.
Article 5	Includes loans awarded by the government for people with disabilities to obtain occupational or commercial employment suitable to their abilities.
Article 6	Includes customs exemption for technical aids and devices used by persons with disabilities.
Article 7	Includes establishment of a trust fund under the control of the Supreme Council for depositing all endowments, donations, and revenues from fines, which will be used to provide care for persons with disabilities.
Article 8	Includes the establishment of a Supreme Council of the Affairs of Persons with Disabilities and associated with a Prime Minister.
Article 9	Includes authorization of the Supreme Council to formulate the strategy and organization of the Affairs of Persons with Disabilities.
Article 10	Includes submission of an annual report by the Supreme Council to the Prime Minister regarding services provided for persons with disabilities.
Article 11	Stipulates that biannual meetings should be conducted.
Article 12	Includes organization of staff appointments by the Supreme Council in accordance with the regulations of the civil service.



Table 6—Continued

Law	Disability Code
Article 13	Specifies that the Supreme Council form a working group and determine and specify the group's expertise and work methodology.
Article 14	Requires that the Supreme Council have a budget that will be subject to the general rules and provisions of the Kingdom's budget.
Article 15	States that all pre-existing codes, policies, procedures, decisions, and instructions to persons with disabilities shall be modified according to this Code within three years of the date of its publication.
Article 16	Requires publication of this code in all official newspapers and should be valid and in effect 180 days from the date of publication.

Adapted from Alodaib & Alsedairy (2014).

**Table 7**

*Summary of Regulations of Parts of Special Education Programs and Institutes (RSEPI)*  
(Modeled after U.S. IDEA)

Law	Description
	The RSEPI is modeled after the U.S. IDEA and includes 11 major parts.
Part 1	Addresses critical definitions used in this legislation so educators can easily communicate fundamental aspects to one another.
Part 2	Ensures the primary goals of special education services are achieved.
Part 3	Presents the foundations of special education in S.A. in 28 subsections that discuss significant concepts regarding the rights of students with special needs to obtain an appropriate education.
Part 4	Defines characteristics of the ten disability categories and describes the processes of evaluation for each category.
Part 5	Discusses the transition services available for students with disabilities in S.A. Ensures that transition services are provided for students as part of their IEPs in the early stage. Defines the types of transition services that may be provided.
Part 6	Describes the responsibilities of professionals (teachers, principals, and service providers) who work with students with special needs in public schools or special schools.
Part 7	Takes responsibilities of the agencies for the school districts and the schools regarding these students and their families are determined in

Table 7—Continued

Law	Description
Part 8	Describes specific procedures of assessment and evaluation for students' eligibility for special education services.
Part 9	Describes the individual education program (IEP) that should be provided for each student who is eligible for special education services.
Part 10	Describes important aspects that should be considered by the multidisciplinary team.
Part 11	Clarifies general rules for schools and school districts

(Alquraini, 2013)

Mu'ajini et al. (2009) addressed reasons the situation has become ambiguous for students with disabilities, including those with LD, in higher education in S.A. and other Gulf countries. These include limitations on the availability of information about the general, academic or economic circumstances of students who enroll in higher education. There are 29 universities in S.A., and only seven of these have policies and procedures for services for students with disabilities. There are several reasons for this absence of policies and procedures at many universities. Some universities are new and are working to prepare the professionals and human resources, while others disregard laws and policies related to students with disabilities because of a scarcity of specialists and an inability to meet the requirements (Mu'ajini et al., 2009).

Thus, it is vital to develop appropriate policies to support students with disabilities to guarantee an independent and satisfying life for them (Almalki, 2017) and to increase the implementation of services for students with disabilities (Alruwaili, 2016; Arafah & Mohammed, 2015). The improvement of policies will help minimize the gap between the legal framework and the provision of services that has been created by a lack of effective implementation of special education services for students with disabilities (Aljadid, 2013).

There is a general need for further research and publications in the field of special

education (Alkhashrami, 2008; Aljadid, 2013; Arafah & Mohammed, 2015; Altamimi et al., 2015) and specifically for studying the issues of students with learning disabilities at the higher education level (Alrashed, 2017; Althuwabi, 2009). Disability research in S.A. has focused on students with physical disabilities (e.g., hearing and visual impairments) in higher education (Alhoshan, 2009); there are no studies to date that specifically investigate the experience of students with LD at the higher education level.

### **Comparing the Legislation for Students with LD in the U.S. and S.A.**

Initially, legislation addressing the needs of students with LD in the U.S. and S.A. had similar goals and purposes. For example, IDEA and RSEPI both have the purpose of providing a free and appropriate education for students with disabilities. Both laws also require schools provide special education services for students with disabilities that include an individual education plan, related services, transition services, and early intervention programs. Further, they both define a specific process that interdisciplinary teams must follow when determining a child's eligibility for special education services (Alquraini, 2013). Both the U.S. and Saudi laws identify the concept of the least restrictive environment (LRE) and require the placement of students with disabilities in regular classes with peers without disabilities (Alhoshan, 2009; Alquraini, 2013). Both IDEA and RSEPI provide essential background statements and similar descriptions of terms used in the legislation (Alquraini, 2013).

Conversely, there are some significant differences between IDEA and RSEPI (see Table 8). Alhoshan (2009) argued that the implementation and administration of the policy may be different in S.A. and the U.S. For example, the concept of the transition plan differs between the two countries. Alquraini (2013) noted that RSEPI does not specify a certain age child should receive special education services; whereas IDEA identifies the age of eligibility for special

education services (birth to 21 years old) for children with a disability. IDEA includes procedural safeguards that grant students with disabilities as well as their families the right to discuss any decisions, such as those regarding assessment and education placement. Such procedural safeguards are not considered in the RSEPI. Further, the process and procedures for early intervention services are explained in IDEA (Alquraini, 2013), but not in RSEPI. For example, RSEPI does not define the qualifications and requirements for high-quality special education teachers, where IDEA does. IDEA includes the requirement that special education teachers must earn at least a bachelor's degree and have a special education license (Alquraini, 2013). IDEA includes transition services requirements for students with disabilities that must be met, at the latest, when the student turns 16 (U.S. Department of Education, 2017). RSEPI provides for transition services early on but does not specify a specific age in the Saudi policy (Alquraini, 2014). Alnahdi (2014) observed that "there is no legal obligation for special education teachers to have transition plans for students of a certain age" (p. 85).

**Table 8***Comparison Between Legislation for Students with LD in the U.S. and S.A.*

What These Laws Provide	U.S. Law (IDEA)	S.A. Law (RSEPI)
Provide free appropriate education and special services, including an individual education plan, transition services, and early intervention programs, for students with disabilities	x	x
Define a specific process for interdisciplinary teams	x	x
Identify the concept of the least restrictive environment (LRE)	x	x
Provide essential background statements and descriptions of terms used in the legislation	x	x
Specify a specific age to receive special education services	x	
Include procedural safeguards for students with disabilities as well as their families	x	
Include procedural safeguards and procedures for early intervention services	x	
Define the qualifications of special education teachers	x	
Specify a specific age for transition services	x	

**Transition to Post-Secondary Education**

Providing transition plans and services is essential for supporting students with disabilities to prepare them for post-secondary education and adulthood. IDEA ensures the IEPs of students with disabilities in secondary schools include transition planning and services at age 14 or earlier (Cameto, Levine, & Wagner, 2004). In a review of the existing literature, Kohler

(1996) developed a taxonomy of transition planning in order to bring about a successful transition. This framework included a comprehensive transition process focused on five areas: student-focused planning, student development, inter-agency collaboration, family involvement, and program structures. Kohler's taxonomy is used for planning, applying, and assessing secondary transition programs in the U.S. (Family Empowerment Centers on Disability, 2011).

According to Kohler and Field (2003), the Office of Special Education Programs (OSEP) has funded and focused on several transition educational services for students with disabilities in both secondary and post-secondary schools. For instance, the National Technical Assistance Center on Transition (NTACT) was established to offer technical assistance and support transition for students with disabilities. NTACT provides important information related to post-secondary transition for students with disabilities, including guidance for student-centered transition planning, education, and services. NTACT provides significant practices, programs, and required skills for success in college, employment, and the community (NTACT, 2016). Further, NTACT highlights the passage of several important legislative acts within the field of special education. Specifically, these legislative acts have been assigned to evaluate both the in-school and post-school outcomes of students with disabilities as well as the special education programs that serve them (NTACT, 2016). NTACT explains that the evaluation of services is multi-faceted, multi-leveled, and includes multiple stakeholders. They promote fully investigating the phenomena of successful capacity building and program improvement through a rigorous and systematic process through a multi-level model of evaluation. They have found that teams are most successful in applying data-based decision making for program improvement when they apply the NTACT model (NTACT, 2016).

On the other hand, in Saudi Arabia, the Ministry of Education highlights the significance

of offering transition services to prepare students with disabilities in their moves from secondary schools to post-secondary schools or to adulthood. Part five of the RSEPI presents the transition services available for students with disabilities and ensures that transition services are provided as part of students' IEPs in the early stages of IEP development (Alquraini, 2013). However, transitions services have not been implemented and practiced effectively for students with disabilities, and these services are still in the development phase (Alhossan & Trainor, 2017; Alnahdi, 2013; Alquraini, 2013). Further, few studies had been published addressing transition services for students with disabilities in Saudi Arabia (Almalki, 2017; Alquraini, 2013).

According to Almalki (2017), there is a lack of transition programs for students with disabilities in Saudi Arabia. Alquraini (2013) found deficits in three areas of transition services in educational institutions for the students with disabilities: the evaluation procedures for the eligibility to receive transition services, the planning and implementing of transition plans for students with disabilities, and the assessment of transition plan efficacy. Also, Alquraini stated there is a need to provide courses related to transition services in academic departments in Saudi universities. These courses have the potential to enhance students' knowledge and their professional skills in providing transition services for students with disabilities in an effective way. Almalki (2017) and Alquraini (2013) emphasized the importance of developing transition policies and services for assisting students with disabilities. In addition, Almalik stressed on the importance of several factors that play a major role in successful transition for students with disabilities. For example, such factors include providing transition educational models and strategies, and cooperating between agencies and vocational organizations to assist students with disabilities to transition smoothly to post-secondary education or to be independent (Almalki, 2017). Thus, Saudi Arabia can benefit from experiences of the U.S. in providing and planning

transition services, as well as evaluating the effectiveness of these services.

### **Support Services for Students with LD in Post-Secondary Education in the U.S.**

In the U.S., IDEA assures that students with LD in K-12 public schools have the right to receive needed support services. Primary and secondary schools are required to provide appropriate evaluation and an IEP for students with disabilities (Newman & Madaus, 2015). However, students' rights under IDEA end when they graduate from secondary school. They do not extend through college or after they reach age 21 (Hadley & Satterfield, 2013; Kauffman & Hallahan, 2005). However, students may be eligible to receive support services at the post-secondary level under several other laws, including Section 504 of the Rehabilitation Act of 1973 and under the ADA (Hadley & Satterfield, 2013; U.S. Department of Education, 2017).

Students with LD face different obstacles in higher education, and it is the universities' responsibility to provide these students with adequate support services (O'Shea & Meyer, 2016). In the U.S., support services for students with learning disabilities in higher education have increased due to the increase in the number of students with LD and the substantial difficulties they face (Madaus, 2005; Vogel, Fresko & Wertheim, 2007). Services for students with LD in post-secondary education include accommodations offered through disability support offices at universities. These offices exist on most campuses in the U.S. to ensure that students with disabilities receive needed support.

The support services center is an essential factor that has an impact on students' success (Madaus, 2000). According to the Learning Disabilities Association of America (2014), the disability support services office has several responsibilities, including using students' documents to evaluate their eligibility for services and appropriate accommodations, providing



information regarding students' rights, policies, and processes, as well as suggesting appropriate learning and test accommodations. The disability services office is also accountable for guaranteeing the confidentiality of all information relating to a student's disability and for helping students to communicate effectively with teaching faculty regarding the students' disabilities and needed support (Learning Disabilities Association of America, 2014).

There are four categories of accommodations most frequently utilized by students in postsecondary settings. These categories include accommodations related to presentation, response, scheduling/timing, and setting. For presentation accommodations, students can receive lectures on audiotape, can be provided with large print materials, or can receive verbal instructions. For response accommodations, students may be allowed to provide verbal responses to exam questions or assignments using a tape recorder. To address scheduling/timing, students may need extra time or frequent breaks. Finally, students may be provided setting accommodations including private rooms away from distractions or the opportunity to take exams in small groups (Cortiella & Horowitz, 2014). McGregor et al. (2016) found students with LD who received accommodations reported less difficulty with assignments and more contact with faculty outside the classroom than students who did not receive accommodations.

### **Support Services for Students with LD in Post-Secondary Education in S.A.**

In 1974, the Ministry of Education created the General Directorate for Special Education to be responsible for planning and improving special education programs in S.A. (Alajmi, 2006; Almousa, 1999). More than 20 years later, in 1996, the Ministry of Education established the Department of Learning Disabilities to supervise school programs for students with LD. This supervision began for males in 1996 and for females in 1997 in three regions in S.A.: Middle Region (Riyadh), West Region (Jeddah), and East Region (Dammam) (Ministry of Education,

2019). These programs have grown continuously and now include 385 programs for females in all districts in S.A. The governorate of S.A. opened the first middle school program in 2005 (Ministry of Education, 2019). In 2012, these programs were expanded to include female high schools. The growth in the number of programs in middle and high schools continues to the present (Alqahtani, 2017; Ministry of Education, 2019).

After the growth of K-12 support, the governorate of S.A. worked to improve and expand services in secondary and postsecondary education for students with disabilities (Ministry of Education, 2017). As a result, there are documented improvements in the number and variety of services available to students with disabilities, including students with learning disabilities (Alnahdi, Saloviita, & Elhadi, 2019; Alqahtani, 2017; Ministry of Education, 2019). Due to the improvement and development of these services at the post-secondary level, public and private universities have begun providing support services at their campuses. To illustrate, the first program established in the Middle East supporting students with LD at the post-secondary level is located at Prince Sultan University (PSU) in Riyadh. PSU cooperated with Landmark College in Vermont in the U.S. to provide services for students with LD (Althuwabi, 2009). Some public universities and community colleges have started providing support services for students with LD, including King Saud University, Princess Nourah Bint Abdulrahman University, Al-Imam Mohammed ibn Saud Islamic University, King Abdulaziz University, and Al Majmaah University.

As stated in King Saud University's Policies and Procedures of Services for Students with Disability (King Saud University, 2013), the support services center has responsibilities toward students with disabilities. For instance, the support services center must: 1) receive a student's requirements related to academic supports and accessible accommodations, 2) provide

information about policies and procedures for students with disabilities in an accessible manner, 3) assess the student's eligibility for services, 4) determine the impact of disabilities on the student's achievement, and must identify appropriate services and accommodations to minimize that impact. In addition, the support services center may provide assistive technology, advocate for students' rights, offer consultations, collaborate with university faculty and principals, prepare evaluation reports about the center's activities, and raise awareness on campus.

Support services centers at universities provide multiple services to assist students with LD. For example, these centers provide faculty members with essential information about students with LD and recommend strategies to support students with LD. The centers also communicate with faculty to make appropriate arrangements for exam dates and times, to introduce the services that are offered to faculty members by the support center, to offer opportunities for faculty members to discuss issues, and to answer their questions about students with LD. Support services centers provide these services by distributing handouts and offering workshops regarding LD and support services provided (King Saud University, 2013).

Support services centers offer academic counseling to help students with LD select their programs or majors and to provide skills training in learning strategies, study skills, note-taking skills, time management skills, communication, and social skills. Academic support services centers also provide peer teaching, readers, varied presentation strategies, extra time, and alternative assessments. There are other related services, such as social, emotional, and health services for students with LD. These services should be provided through support services centers at universities once a student has submitted his/her documents (King Saud University, 2013).

### **Students with LD Confront Challenges in Post-Secondary Education**

Graduating from high school raises numerous questions for students with LD. They may become concerned about their plans, such as starting college, getting a job, living with their families, or having friends. Answering these questions may be time-consuming, but most high schools offer services for students at career centers where students can find information about college requirements, required tests, information sessions, scholarships, etc. These services alone are not sufficient for assisting students with LD in college planning (Simpson & Spencer, 2009). Students with LD can learn more about the academic life, improve their time management and study skills, adapt to academic requirements, and navigate campus resources through participation in freshman orientation sessions (Mayhew, Stipeck, & Dorow, 2011).

However, even with these services provided before and after enrolling in college, students with LD may face challenges when starting college, such as new lifestyles, new responsibilities, a different atmosphere, and various requirements (Hong, Haefner, & Slekar, 2011; Denhart, 2008; Madaus, Banerjee & Merchant, 2011; Simpson & Spencer, 2009). Hadley (2007) stated that “moving on to higher education means achieving a new level of responsibility and independence, especially for students with learning disabilities” (p. 10). Students with LD may face challenges during their academic journey related to academic, faculty and teaching methods, social and emotional, or to receiving support services, or technology issues.

### **Academic Challenges**

When students with LD enroll in college, they may face academic challenges and may struggle to adjust to these challenges or to new educational settings. Students may struggle with managing their schedules, selecting their classes, submitting new types of assignments, and adjusting to new teaching styles (Hadley, 2017; Hadley & Satterfield, 2013; Shea, Hecker, & Lalor, 2019). In McGregor et al.’s (2016) research, students with LD confronted more struggles

with academic tasks, assignments, and limitations in skills that interfered with learning. In addition, students with LD found the requirements for some courses difficult (McGregor et al., 2016). These obstacles negatively affect students with learning disabilities and could become reasons for dropping their classes and/or leaving school (Roer-Strier, 2002).

Students with LD confront academic obstacles, such as requiring extra time to submit their assignments or to finish their exams. Facing these obstacles demands extra work, effort, and more time from students to keep their grade point average (GPA) at an acceptable level (Adam & Pula, 2011). According to Denhart (2008) and DuPaul, Pinho, Pollack, Gormley, and Laracy's (2017) findings, students with LD took more time to complete assignments in comparison to their peers without LD. Additionally, students with LD stated the outcomes of their efforts did not meet their workload and their expectations about the academic challenges in college were higher compared to their peers (Denhart, 2008).

Some students with LD face difficulties in writing essays or organizing their papers. According to Connor (2013), students with LD faced difficulties in "organizing thoughts and ideas, creating a connection between information, and crafting essay responses that reveal a deeper interaction with class materials" (p. 277). In addition, the volume of writing and reading assignments and poor writing skills became obstacles for students with LD (Hadley, 2017; Heiman & Precel, 2003). Similarly, reading assignments for some classes, such as history, English, philosophy, and religious studies can be difficult for students with LD (Hadley & Satterfield, 2013). Denhart (2008) stated that students struggled to organize concepts in reading or oral and written comprehension. Wren and Segal (1998) noted several difficulties students with LD may face in writing and reading assignments. In reading, these may include

- confusion of similar words, difficulty using phonics, problems reading multi-syllable words,
- slow reading rate and/or difficulty adjusting speed to the nature of the reading task, and
- difficulty with comprehension and retention of material that is read, but not with material presented orally. (p. 5)

In writing, students may encounter

- difficulty with sentence structure, poor grammar, or omitted words,
- frequent spelling errors, inconsistent spelling, or letter reversals,
- difficulty copying from the board or overhead, or
- poorly-formed letters, difficulty with spacing, capitals, and punctuation (p. 5).

Critical thinking can be another challenge for students with LD. Connor (2013) mentioned that critical thinking was a barrier that students with LD faced, especially when creating "large bodies of information" or synthesizing multiple sources of information to generate unique ideas, as opposed to writing a "descriptive paper" (Connor, 2013, p. 278).

### **Faculty Members**

Students may encounter issues related to communication with faculty members or adjusting to new teaching styles. According to Cawthon and Cole (2010), the interaction levels of U.S. students with LD with their colleagues and professors were lower than of students without LD, and the relationships and communications between students with LD and faculty members seemed to be more formal. There are several obstacles associated with a lack of awareness and information about LD among faculty members, fieldwork supervisors, and university employees (O'Shea & Meyer, 2016; Roer-Strier, 2002).

Alkhashrami (2008) found that Saudi students with disabilities (visual and physical impairments) were dissatisfied with communication with university staff members. Alkhashrami stated the cooperation between students with disabilities and staff members was minimal and that affected their emotions and satisfaction with the university. Alkhashrami (2008) also found that teaching methods did not match students' needs and faculty members did not offer academic facilitation or accommodations, such as providing extra time at exams or recording their lectures. Faculty members' lack of accommodation was due to their lack of experience in dealing with students with disabilities. For example, students with disabilities mentioned that faculty members moved from one subject to another, changed course requirements without providing a note to students with disabilities, used inappropriate technology to deliver information, and selected inappropriate locations for exams (Alkhashrami, 2008). Hadley and Satterfield (2013) pointed out that students with LD faced difficulties adjusting to their professors' teaching styles. Hadley's (2007) findings revealed students with LD found their professors moved quickly when reviewing class materials and that students could not keep pace.

### **Social and Emotional Challenges**

Students with LD experience more social and emotional challenges during their academic journey as compared to their peers without LD (Elksnin & Elksnin, 2004; Nelson & Harwood, 2011). Students with LD confront social challenges in college related to social climate, friendships, and communication with colleges and faculty members (Rodis, Garrod, & Boscardin, 2001; Cawthon & Cole, 2010; McGregor et al., 2016). According to McGregor et al. (2016), students with LD were not happy with their social experiences at the university, and their satisfaction with the campus atmosphere was low. Students with LD also revealed the campus area was overwhelming, professors were not cooperative, and they had few friendships. Findings

showed students with LD lacked time for social activities (McGregor et al., 2016). Rodis, Garrod, and Boscardin (2001) found that “Adult students reported a lack of understanding by their teachers and parents about how their LD affected them emotionally and psychologically” (p. 167).

Several aspects of the lives of students with LD can be affected by the LD stigma, such as self-perceptions, communications with teaching faculty, and their readiness to accept accommodations (Lightfoot, Janemi, & Rudman, 2018). Students with LD can find communicating with peers difficult, and they might be misunderstood. Couzens et al. (2015) found students with LD faced difficulties with effective communication, and they confronted problems in group sessions. According to Denhart (2008), students with LD “feel they are being misunderstood, being reluctant to request accommodations for fear of invoking stigma” (p. 491). Students with LD face difficulties with verbal communication, and their way of thinking is different than their peers without LD. Wren and Segal (1998) pointed out that students with LD may face “(a) difficulty reading facial expressions, body language, (b) problems interpreting subtle messages such as sarcasm, (c) confusion in spatial orientation, getting lost easily, and difficulty following directions, and (d) disorientation in time, difficulty telling time” (p. 5).

Students with LD in postsecondary education may experience emotional issues, such as anxiety, depression, and frustration (Arthur, 2003; Ceci, 2013; Hadley, 2007; Zysberg & Kasler, 2017). According to Connor’s (2013) findings, students with LD experienced anxiety and poor self-esteem when they enrolled in college. Students might face frustration (Hadley, 2017) as well as poor self-perception and lower self-esteem (Hartman-Hall & Haaga, 2002). In addition, students may experience “lower levels of hope and optimism” and “higher levels of loneliness” compared to their peers without LD (Rosenstreich, Feldman, Davidson, Maza, & Margalit, 2015,



p. 346). Students with LD also experience “behavior problems, low self-esteem, poor interpersonal relationships...anger, depression, and job failure” (Rodis, Garrod, & Boscardin, 2001, p.167). Students with LD felt embarrassed in their classes because of their additional needs (Hadley & Satterfield, 2013). These emotional experiences affected students with LD in undesirable ways, and their memories about the impact of their learning disabilities were “negative and painful and long-lasting” (p. 167). DeLee (2013) found that students with LD tried to “avoid the stigma, negative reaction, negative experience with faculty, and they expressed fear of negativity from faculty if services were requested” (p. 23).

### **Support Services**

Students with LD face problems that prevent them from seeking support services when they start college, such as insufficient awareness of campus disability support centers, lack of available services, lack of awareness about their own hidden disabilities, or feelings of shame or embarrassment about their disabilities. Some students have inadequate knowledge about accessibility and services provided at their college or insufficient information about their disability (DeLee, 2013; Hadley & Satterfield, 2013; Lightner, Kipps-Vaughan, Schulte, & Trice, 2012).

Lack of resources can also pose problems. For example, Hadley (2017) found that students with LD often confronted a scarcity of qualified note-takers. In another study, Hadley and Satterfield (2013) found that students with LD were not satisfied with the type and level of available support services; they indicated that writing labs were not useful and not focused on their needs, and they demanded improvements. O’Shea & Meyer (2016) stated that students with LD described the disability services, resources office, and staff as strict, and the environment as limited instead of supportive. Students with LD had some previous background information

about services at college; however, that knowledge was not sufficient. Floyd (2012) indicated students with LD were not receiving adequate accommodations and instructional strategies at the post-secondary level.

Some students with LD believe their experience will go smoothly in college and they will achieve independence without assistance from support services centers, or they do not have time to go to the centers. Feeling ashamed and embarrassed may also prevent students with LD from obtaining academic assistance and accommodation (Lightner, Kipps-Vaughan, Schulte, & Trice, 2012). Couzens et al. (2015) pointed out that most professionals who work with students with LD worried about the students because they would not ask for assistance, but some faculty provide support for students with LD.

Students with LD may not seek support services because they feel the support services office is for students with physical disabilities, such as hearing or visual impairments, and not for their hidden disability (Couzens et al., 2015). Additionally, Cawthon and Cole (2010) noted that some students with LD stopped seeking and receiving services because the services were inadequate and difficult to arrange. In addition, students experienced difficulties when arranging a place or time for exams and evaluations (Cawthon & Cole, 2010).

In S.A., there is a negative attitude toward support services centers and their responsibilities to provide the required materials to assist students with disabilities. Financial and human resources are scarce at support services centers, and the number of professionals who work with students is limited. Even with the insufficiency in services, however, students with physical and visual impairments admitted they benefited from the support services center (Alkhashrami, 2008). Arafah and Mohammed (2015) stressed that students with disabilities were not satisfied with the services provided for them at Almajmaah University in S.A. Students with

disabilities felt the role of the support services center was ineffective and insufficient. Students with disabilities recommended additional services to support them and interesting activities that assist with learning and social engagement (Arafah & Mohammed, 2015).

### **Technology Challenges**

Assistive technologies are used to facilitate the learning environment of students with LD, and these technologies are somewhat helpful in school, university, and work (Taymans et al., 2009). The use of assistive technology is mandatory in supporting students with LD with their academic assignments or communication. However, in S.A., technology poses a challenge for students with disabilities, especially students with LD. In addition, students with LD at Saudi universities may struggle when using assistive technology because of language differences (Alquraini, 2011). For instance, Alquraini emphasized that "the main issue of applying high assistive technology (such as adaptive communication devices and switches) with students with disabilities in Saudi Arabia is that most of these devices use only the English or Spanish languages" (p. 4).

Alkhashrami (2008) found university websites or online resources were not adequately designed for students with disabilities. She recommended university websites and online courses be accessible for students with disabilities to complete their academic assignments or to communicate easily with their classmates and faculty members. According to Alkhashrami's findings, assistive technology was absent from university classrooms, libraries, and computer labs. Alkhashrami highlighted the lack of assistive technology was not only at the higher education level, but was an issue across academic levels, including the elementary and secondary levels. To illustrate, Somaily, Alzoubi, and Rahman (2016) found a lack of use of technology, such as computer and internet resources, with students with LD at the resources room in an

elementary school in the South Region (Najran). This lack of application of assistive technology will affect the future learning development of students with LD (Alkhashrami, 2008).

### **Strategies Assist Students with LD to Overcome Challenges**

Students with LD should receive support services to assist in their success at the post-secondary level (Bradshaw, 2001). Support services may include accommodations or academic strategies, emotional and social strategies, peer/family support, and assistive technology.

#### **Academic Strategies**

It is crucial for students with LD to become more self-sufficient and to become productive people in the community. Earning a college degree is one factor that could assist students with LD in achieving that goal (Hadley & Satterfield, 2013). Therefore, it is critical for students with LD to receive support services in postsecondary education to facilitate and assist them in achieving their goals and reducing academic obstacles (Bradshaw, 2001). Hadley and Satterfield (2013) pointed out that after graduating from high school and starting college, students with LD are required to learn various strategies to obtain knowledge and to prepare for exams because LD is a lifelong disability.

As students with LD often lack strategies needed to succeed and reach their goals, it is important to provide supportive services and strategies to help them overcome obstacles (Mu'ajini et al., 2009). According to Alwabli (2001), students with LD at the college level "demand academic assistance and support programs which help them to adjust with the college environment, have awareness about the requirements, and how to make a balance between their abilities and the level of their academic ambitions" (p. 7).

Support services are provided by experts, academic advisors, volunteer students, and faculty members in the postsecondary environment (Lightfoot, Janemi, & Rudman, 2018). Students with LD can attain advantages from support services and accommodations that assist them to be successful in college, and students may find different ways and alternative supports to achieve their goals (Cooper, 2015).

Various research studies have shown that students with LD utilize multiple strategies to assist them as college students. Some students with LD have a preferred learning style that benefits them while studying or preparing for exams (Heiman & Precel, 2003). For instance, selecting visual or oral materials, and obtaining clarification from graphs and highlighting, helps some students with LD. Additionally, students with LD use verbal or graphic techniques that help create unique non-written methods to remember information more easily, such as using songs or chanting a text. Students also linked information through imagination, creating maps, or writing outlines (p. 25). Students prefer teaching styles that allow them to use various communication and expression abilities to show their knowledge and proficiency, such as interactive student-centered teaching approaches (Pino & Mortari, 2014).

Some students with LD find studying in an isolated environment and using soft, relaxing music is beneficial for concentration. Having extended time, taking breaks during exams, disregarding spelling mistakes, using computers or laptops, accessing tape-recorded lectures and books, and taking private tutoring sessions are all useful strategies for students with LD (Heiman & Precel, 2003). Students with LD also find using different exam formats, extra time, quiet rooms, readers, scribes/note-takers, and tutoring sessions were helpful for assignments and exams (Cawthon & Cole, 2010; DeLee, 2013; Koch, Mamiseishvili, & Wilkins, 2016; Weis, Dean, & Osboren, 2016).

Students with LD can benefit from academic services such as counseling, tutoring, and academic advising (Hadley & Satterfield, 2013). Peer tutoring is used often at support services centers to assist students with learning disabilities in higher education (Vogel, Fresko, & Wertheim, 2007). Some students select interactive and student-centered methods. For example, Pino and Mortari (2014) found students preferred interactive and student-centered teaching approaches. Furthermore, DuPaul, Dahlstrom-Hakki, Gormley, Fu, Pinho and Banerjee (2017) found the most useful strategies to assist students with LD were tutoring and coaching. Their findings revealed coaching had a positive impact on students' achievement and that students' weaknesses in academic and learning skills were improved by tutoring sessions (DuPaul et al., 2017).

Students with LD benefit from safe and supportive environments, positive professor-student relationships, and conversations that develop metacognition. Zeng, Ju, and Hord (2018) found students with LD noticed general academic improvements because of safety and supportive interventions. A metacognition intervention allowed students to generalize their learning experiences in different educational environments. In addition, they found that learning study strategies and skills, such as self-regulated learning strategies, self-determination, and time management, led to greater success for students with LD at the postsecondary level.

### **Social and Emotional Support**

Students with LD find supportive, individualized counseling and relationships with tutors offer positive learning experiences. These social and emotional aspects are essential to encouraging students with LD to overcome challenges and difficulties during their educational journey (Pino & Mortari, 2014). Discussing, sharing, and discovering thoughts, concerns, and experiences with trusted faculty members were the most important factors in assisting students

with LD. These factors had a positive impact on students with LD and improved their self-determination, self-authorship, and self-agency. Similarly, Mytkowicz and Goss (2012) found students with LD's coaching relationships and metacognitive conversations with their professors in the support center had noticeable positive effects and enhanced the students' self-images.

### **Peer/Family Support**

Forming friendships with classmates or colleagues is an essential part of the experience of post-secondary education for students with LD, and these relationships have a positive effect on students. For instance, students who had good relationships with their peer mentors expressed more positive feelings. These students benefitted from involvement in campus activities and relationships with their mentors (Griffin, Wendel, Day, & McMillan, 2016). Students revealed they had more experiences and more personal development when interacting with other individuals (Griffin et al., 2016). Thus, it is beneficial to provide peer mentors for students with LD, and some support centers currently offer peer mentors or peer tutoring (Connor, 2012).

The family background of students with LD plays an essential part in their college success. According to Showers & Kinsman (2017), family background has a substantial and critical impact on students' attributes, which has an immediate influence on college success. Families provide both emotional and financial support. Emotional support is significant because parents encourage students to reach their goals. In addition, students may have other supportive individuals, such as friends, a spouse, and faculty members (Greenbaum, Graham, & Scales, 1995).

### **Assistive Technology**

The use of assistive technology is one of the most common accommodations provided to students with LD and it has been shown to make a significant difference in education results (Cawthon & Cole, 2010). Assistive technology is defined as:

The development and application of organized knowledge, skills, procedures, and policies relevant to the provision, use, and assessment of assistive products. An assistive product is any product (including devices, equipment, instruments, and software) either specially designed and produced or generally available, whose primary purpose is to maintain or improve an individual's functioning and independence and thereby promote their wellbeing (Khasnabis, Mirza, & Maclachlan, 2015, p. 2229)

Assistive technology can enhance students' satisfaction with learning and their quality of life (Perelmutter, McGregor, & Gordon, 2017). As a result, the availability of assistive technology and new devices has a tremendous impact on improving students' achievements at the postsecondary level and on their future careers (Burgstahler, 2003).

Several applications can be used to support students with LD with their writing, such as Simple Mind Plus, Phraseology, Hemmingway, and the Writer's Diet Test. These apps help students by promoting working memory and focusing on a higher order of writing skills (Ewoldt, 2018). Forgrave (2002) used three types of assistive technology for students with LD at secondary levels: speech synthesis, organizational software, and voice recognition programs. These technologies were adapted to the students' strengths and empowered their skills to develop their achievement in reading and writing.

Smart-pens, text-to-speech, and word processing-based assistive technology interventions can all have significant and positive impacts on writing error rates; however, text-to-speech systems have little positive impact on the reading comprehension of students with LD



(Perelmutter, McGregor, & Gordon, 2017). The use of several types of multimedia and hypertext is more frequent in post-secondary education, and applying multimedia and hypertext intervention has been demonstrated to improve students' performance (Perelmutter, McGregor, & Gordon, 2017). Another type of assistive technology is the touch-typing instructional program. It is used to improve the keyboarding skills of higher education students with LD, and results have shown improvements in their performance (Marom & Weintraub, 2015). Marom and Weintraub found that students with LD wrote faster when they used the touch-typing program and that their keyboarding speed was faster than their handwriting speed; this result confirmed the value of the touch-typing program for students with LD.

Weis, Dean, and Osboren (2016) found students with LD usually require some assistive technology and in-class aids, and Heiman and Shemesh (2012) found students with LD had adequate information about assistive technology, used it frequently and efficiently, and employed learning strategies via online resources, such as e-learning, PowerPoint, CD-ROM, and WebCT. Students with LD were satisfied using web courses and indicated that using the course website was essential to communicating with their professors or tutors (Heiman & Shemesh, 2012). According to DeLee (2015), students reported being very satisfied using assistive technology such as text conversion software, and reading and listening technologies.

### **Limitations Within the Current Literature**

No studies have focused on students with learning disabilities at the higher education level in S.A.. Most studies have focused on students with physical disabilities, such as hearing and visual impairments in higher education, or have focused on faculty perspectives on support services (Alhoshan, 2009). For instance, Althuwabi (2009) conducted a study at King Saud University investigating the need for support programs for students with learning disabilities at

the college level. A survey collected 280 faculty members' opinions. Results showed that faculty members had an acceptable level of awareness about learning disabilities but emphasized the need for providing support programs to assist students with LD in overcoming obstacles.

Alkhashrami (2008) evaluated support services for students with disabilities at King Saud University (KSU) and conducted a study that utilized a quantitative approach to investigate 85 students with disabilities' (visual impairments and other physical disabilities) attitudes toward support services. Alkhashrami found students with disabilities confronted educational and social issues during their academic journey. Alkhashrami also identified a substantial weakness in the academic services for students with disabilities at KSU. For instance, Alkhashrami found that teaching methods did not correspond to students' needs and lacked in the use of assistive technology. Further, faculty members provided limited accommodations, such as extended time or recorded lectures.

In another study, Arafah and Mohammed (2015) found faculty members, academic advisors, and employees who are responsible for university activities at Almajmaah University were aware that students with disabilities encounter obstacles. However, even though Almajmaah University provides services for students with disabilities, students were not satisfied with the services, and students with disabilities felt the role of the support services center was ineffective and insufficient. Students with disabilities recommended extra services to support them and interesting activities to assist learning and social engagement (Arafah & Mohammed, 2015).

Alwabli (2001) conducted a study to investigate faculty members' perspectives on the nature of the facilities, support services, and special programs that should be provided by higher education institutions for students with disabilities. The findings highlighted the need to offer

accommodations to support students with disabilities at the university, including academic supports, library accommodations, and building modifications. The results affirmed the significance of a policy to provide an appropriate higher education environment by offering support services. In addition, faculty members emphasized the need for flexibility during the admission process and exams and for providing learning support materials and tools.

Jawhari (2010) conducted a case study to examine the nature of IT services provided for students with visual impairment at King Abdul-Aziz University in the West Region (Jeddah). The findings showed that 100% of students with visual impairment did not visit the library, 56% of students found that the location of the IT center was not appropriate, and 65% of students pointed out that the environment and furnishings at the center were not favorable.

Alayeed et al. (2010) surveyed 17 students with disabilities (physical disabilities such as visual and hearing impairments) at Ataif University about the problems they faced. The students reported confronting financial, administrative, transportation, and psychological problems. Similarly, through a literature review of support services for students with learning disabilities, Alrashed (2017) emphasized the necessity of delivering support services for students with LD at the college level.

No studies have been found that explore the challenges confronting students with learning disabilities at the postsecondary level. Due to this lack of research, it is crucial to conduct the current study to investigate the challenges facing students with LD and to find out how they overcome these challenges while receiving support services at Saudi universities. The researcher aims to provide valuable information about challenges that face students with LD confront while receiving support services at two Saudi universities from the perspective of students with LD and staff work at support services center, and explore strategies they use to

overcome these challenges. Conducting this study is significant in filling a gap in the literature and opening doors for more exploration and research into support for students with learning disabilities at the postsecondary level.

### **Summary**

Chapter II provided a review of the literature related to this study. It began with a discussion of the definitions of LD, the prevalence of learning disabilities in the U.S. and S.A., and relevant legislation in the U.S. and S.A. A comparison between legislation in the U.S. and S.A. was provided. Next, Chapter II provided details about current support services at the post-secondary education level for students with LD in the U.S. and S.A. Finally, this chapter discussed the transitions to post-secondary education, the challenges that students with LD confront, the strategies they use to overcome these challenges, and the limitations within the current literature.

### CHAPTER III

#### METHODOLOGY

The purpose of this qualitative study was to explore the challenges confronting students with LD who receive assistance from support service centers at Saudi Arabia universities, discover strategies and skills students used to overcome these challenges, and review their suggestions for developing support services at S.A. universities. Detailed descriptions of the research design, reflections on my identity, instrument, participants and study setting, data collection procedure, data analysis trustworthiness, and limitations of the study are presented below.

This study used in-depth, face to face, semi-structured interviews to answer three research questions:

RQ1. What are the challenges students with LD face at the beginning and during postsecondary education?

RQ2. What strategies and skills did the support services staff and students with LD find effective in overcoming challenges during postsecondary education?

RQ3. What do students with LD and support staff recommend to improve services?

#### **Research Design**

A qualitative method was implemented to address the research questions for this study. This methodology was valuable in obtaining detailed descriptions of the experiences of students with learning disabilities attending Saudi Arabia universities. It also gave participants a chance to express their thoughts and needs, to discuss the challenges they face, and to explore strategies

and skills that they used to overcome those challenges. This methodology allowed the researcher to address the academic, social, and emotional needs of students with LD.

Creswell (2014) defined qualitative research as “an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem” (p. 32). Researchers in qualitative research collect the data in the participants’ setting and use an inductive method to analyze the data and build themes from specific to general. Then researchers interpret the data (Creswell, 2014). The qualitative method seeks to understand “how people interpret their experiences, how they construct their world, and what meaning they refer to their experiences” (Merriam, 2009, p. 5). Qualitative research has several characteristics. According to Marshall and Rossman (2016), qualitative research: a) “take place in the natural world, b) uses multiple methods that are interactive and humanistic, c) focuses on context, d) is emergent rather than tightly prefigured, and e) is fundamentally interpretive” (p. 2). In this approach, a researcher: a) views social phenomena holistically, b) systematically reflects on who he/she is in the inquiry, c) is sensitive to his/her personal biography and how it shapes the study, d) uses complex reasoning that is multifaceted and iterative, and e) conducts systemic inquiry. (p. 2) Qualitative research includes five approaches: (a) narrative research, (b) phenomenology, (c) grounded theory, (d) ethnography, and (e) case study (Creswell, 2013).

### **Benefits of Qualitative Method**

A qualitative method has several benefits. For example, a qualitative method allows the researcher to review participants’ answers and get more details about their experiences, attitudes, and behaviors. Also, in cooperation with the participants, a researcher helps to create a rich and in-depth narrative that covers all the study goals. The open-ended questions allow the researcher to obtain information and answers that were not expected. In addition, because of the flexibility

in collecting qualitative data, a researcher can ask questions in different ways to ensure participants have understood them (Guest, Namey & Michell, 2012). In qualitative method, according to Merriam (2009), verbal and nonverbal communication, exploring unexpected responses during the interviews and reviewing data directly afterward, helps expand a researcher's understanding.

### **Limitations of Qualitative Method**

One limitation of the qualitative method is that data analysis requires more time. This approach is not only about collecting data or doing interviews but also transcribing, coding, and interpreting the findings. Also, if a researcher and the participants use different languages, an extra step (translation) adds more time to data analysis. So, the process of qualitative data analysis is time-consuming and complicated (Guest, Namey & Michell, 2012; Marshall, Cardon, Poddar, & Fontenot, 2013). Another limitation of the qualitative method is that findings cannot be generalized to larger populations because the sample size is usually small. However, the aim of qualitative research is not generalizing the results (Guest, Namey & Michell, 2012) rather rich and better understanding of students with learning disabilities experiences at post-secondary education level.

### **Phenomenological Research**

This study uses phenomenology as its qualitative approach. The goal was to explore and understand the challenges and obstacles that confront students with LD who receive assistance from support service centers at S.A. universities. In addition, the study took a closer look at the strategies and skills students used to overcome these challenges, and it reviewed their recommendations and suggestions for developing such services (Creswell, 2014).

Phenomenology is an approach to discover the experiences of many individuals, provide an extensive description of the common meaning of these experiences, and describe and analyze what the individuals shared. It has become a valuable and vital design in educational and social sciences research (Creswell, 2013; Marshall & Rossman, 2016; Padilla-Díaz, 2015). According to Richards and Morse (2012) “phenomenology gives us insights into the meanings or the essences of experiences we may previously have been unaware of but can recognize” (p. 7). According to Finlay (2011), the “phenomenological approach offers individuals the opportunity to be witnessed in their experience and allows them to give voice to what they are going through, it opens new possibilities for both researchers and researched to make sense of the experience in focus” (p. 11). Gallagher and Zahavi (2013) stated, “phenomenology is concerned with attaining an understanding and proper description of the experiential structure of our mental/embodyed life; it does not attempt to develop a naturalistic explanation of consciousness” (p. 184). The phenomenological method focuses on determining “what an experience means for the persons who have had the experience and are able to provide a comprehensive description of it” (Moustakas, 1994, p. 13). Also, phenomenological method implies an inductive approach to data analysis; it begins with narrow meanings attached to the data, then shifts to more general meanings and identifies themes across shared experiences (Creswell, 2013). The phenomenological approach depends on interviews to get in-depth details such as ideas, feelings, and actions about participants’ experiences (Creswell, 2013; Marshall & Rossman, 2016).

### **Reflections on Researcher Identity**

Working in the special education field for several years has allowed me to expand my horizons and focus on students with learning disabilities in post-secondary education. When I worked as a faculty member at a Saudi university in the special education department, I noticed



that some students struggled with writing and spelling. These students might not know they have LD, or they did not receive special education at earlier education levels. In addition, support services are very limited to students with physical disabilities or students with visual and hearing impairments. Seeing these students struggling without help led me to do some research about students with learning disabilities in post-secondary education and the services provided for them. I found it essential to conduct this study because there is not much known about students with learning disabilities in post-secondary education. This limitation in the literature review encouraged me to focus on this topic.

In addition, studying in the United States allowed me to become more involved in the special education field and to learn more about the experience of students with disabilities, including students with learning disabilities. I worked as a volunteer for one year in the Mason Live program for students with disabilities at George Mason University. Also, I visited the Disability Center at Western Michigan University, met students with learning disabilities, and discussed their experiences as students with LD. During those two experiences, I saw a variety of supports and services for students with disabilities, such as academic, social, and emotional support. Those experiences inspired me to investigate the situation of students with learning disabilities in Saudi universities, specifically the challenges students encounter, the services provided for them, and the strategies they used to overcome their challenges. Also, as a faculty member, one of my responsibility is preparing future special education teachers to work and deal with students with LD in all academic stages not only for K-12 phases but also for postsecondary and employment phases.

### **Instrumentation**

Getting a specific type of information is the goal of qualitative interviews (Merriam &

Tisdell, 2015). Interviews in qualitative research “yield direct quotations from people about their experiences, opinions, feelings, and knowledge” (Patton, 2002, p. 2). The interview offers a beneficial way for a researcher to know about people’s experiences.

The in-depth, face-to-face, semi-structured interview is a common method of data collection in qualitative research (Morgan & Bhugra, 2010). The semi-structured interview uses open-ended questions, general questions, and questions focused on understanding the phenomena (Creswell, 2013). Guest, Namey and Michell (2012) state a semi-structured interview “allows the researcher to get deep answers to their questions from the experts on the issue.” Open-ended questions allow the most authentic voice to emerge and provokes views and opinions from participants.

Interviews have several benefits. A researcher can get historical information during the interview (Creswell, 2013), and an interview allows for quick follow up with the participants. A researcher can ask for further explanation when needed (Marshall & Rossman, 2016). This method provides rich opportunities for a researcher to practice “control over the line of questioning” (Creswell, 2014, p. 201).

On the other hand, interviews have limitations: an interview “a) provides indirect information filtered through the views of interviewees, b) provides information designated place rather than the natural field setting, c) researcher’s presence may bias responses, and d) not all people are equally articulate and perceptive” (Creswell, 2014, p. 241).

This researcher prepared the interview questions after reviewing the study questions, the study problem, and the study purpose. Guidelines for developing questions were followed to ensure that each question provided additional helpful information for the study (Guest, Namey, & Michell, 2013). The questions were open-ended to encourage participants to talk freely about

their experiences. The researcher also considered how to ask the questions and to interpret the answers (Qu & Dumay, 2011). The interview questions are in Appendix (A, B, C, and D).

## **Participants and Study Setting**

### **Sample**

Sampling is one of the most important parts of research. According to Guest, Namey, and Michell (2012), sampling “refers to the process of selecting a subset of items from a defined population for inclusion into the study” (p. 1). Items in the sample can be individuals, periods of time, events, or groups. The sample can even be one participant or a single case, but it must be selected purposefully (Patton, 2002). As Suri (2011) observed, “purposeful sampling requires access to key informants in the field who can help in identifying information-rich cases” (p. 66).

A purposeful sample method was used to recruit individuals for this study. The researcher recruited participants and found sites for the study because this allows them to inform and understand the research problem and central phenomena in the study (Creswell, 2013).

Sample size in qualitative research depends on several factors, such as the research questions, the data to be collected, the data analysis process, and the resources to support the study (Merriam & Tisdell, 2015). In phenomenological studies, Padilla-Díaz (2015) recommended three to 15 participants and Creswell (2014) said three to 10.

The sample size for this study was 10 participants: five students and five staff members:

- The students were full-time undergraduate or graduate students with learning disabilities.
- The students received services from the support services centers.
- The students may have additional disabilities such as attention deficit hyperactivity disorder.
- The staff who work at the support services centers at the universities.

## Setting

The setting for this study were identified as University A and University B. University A includes 102 colleges in Riyadh and in 71 cities in Saudi Arabia. It has 41,441 students.

University B has 135,538 students and includes 11 colleges in and around Riyadh.

Support services centers at the two universities offer services to students with disabilities such as physical disabilities, hearing and visual impairments, and learning disabilities. The center at University A provides services to 141 students with disabilities, including 18 with learning disabilities, while the center at University B supports 112 students with disabilities, including three with learning disabilities (see Table 9 for more details about the number of students with disabilities in both centers). The interviews were held at quiet conference rooms or staff offices of the two universities.

**Table 9**

*Number of Students with Disabilities at Support Services Center, University A and B*

Type of disabilities	Number of students University A	Number of students University B
Physical disabilities	42	35
Hearing impairments	14	17
Visual impairments	19	40
Learning disabilities	18	3
Chronic diseases	39	0
Communication disorders	6	0
Other disorders	2	11
Muscular sclerosis	0	3
Total	141	112

## Human Subject Institution Review Board (HSIRB)

To gain access to the setting of this study and to recruit participants, the researcher obtained three approvals to contact the administrators of the support services centers to find the

individuals who could provide access to the participants (Creswell, 2013). The researcher followed two steps. First, the researcher obtained approval from the Human Subjects Institutional Review Board (HSIRB) at Western Michigan University (Appendix E). Second, the researcher obtained approvals from the Departments of Scientific Research at the two universities. The process to secure the approvals from the universities took around two months.

### **Recruitment and Selection of Study Participants**

After receiving the necessary approvals, the researcher contacted the administrators of the support services centers at both universities to start the data collection process (Appendix F and G); the administrators were cooperative and facilitated the process of data collection. To reach a satisfactory pool of participants, the researcher followed five steps:

- 1) A recruitment letter was sent by email to the administrators of the support services centers. The letter included information about the study: its purpose, method, sample criteria, the researcher's name, and contact details (Appendix H and I).

- 2) The researcher contacted the support services centers to ensure they received the approval from the Department of Scientific Research.

- 3) The researcher traveled to Riyadh to meet the administrators of the support services centers, and they provided a list of students who were interested in taking part in this study.

- 4) Using the list of potential participants, the researcher sent an email or a text message to each of them, providing contact information and explaining the consent form and how to complete it when they agree to participate.

- 5) The researcher scheduled the interviews with the participants. There was an opportunity for the researcher and the participants to hold short conversations before the interview.

Text messages were sent to the participants to confirm the day and time for the interview. The researcher met each participant in a private conference room at the university. Recorders were set up to record the interview and the researcher had materials for writing questions and comments. Interviews started with a greeting and thanking participants, then asked general questions about their day, classes, and work to make them feel comfortable. Building a personal connection and relationship with participants is essential for effective interviewing (Guest, Namey, & Michell, 2013). Before the interview, participants were given the interview protocol and consent letter. The consent letter described the purpose of the study and the procedures for the interviews. During the interview, the researcher wrote relevant questions and comments to document perceptions about the responses. Participants could take breaks if needed.

Participants were asked to provide the details of their stories, actions, and feelings in an open and relaxed way to reveal their attitudes toward their experiences, the researcher could get deep information and rich data (Simon & Goes, 2011). Also, the researcher collaborated with the participants during and after the interview to clarify some answers, using cellphone texts or meeting them at the university (Creswell, 2013). I provided a clear purpose of the study to make sure the participants understand it and avoid irrelevant questions or any misunderstanding. Participants could ask for clarification and explanation if there was an unclear question.

Participants were provided with pseudonyms to protect their identity. Participants had noticed that their real identities are protected and informed that their answers will be used for academic purposes only (Creswell, 2013). At the end of the interview, the researcher provided contact information, email, and phone number to the participants in case they needed further information. Each interview took 45 to 120 minutes. The transcripts for all interviews were saved in electronic files on the researcher's computer.

### **Data Collection Procedure**

The data collection source for this study was in-depth, face to face, semi-structured interviews. The in-depth, semi-structured interviews were used to investigate the challenges that confront students with LD who receive assistance from support service centers at S.A. universities. Also to explore the strategies and skills students used to overcome these challenges, and discover their recommendations for developing such services. Four steps were followed for data collection procedure. First, prospective participants were given a consent letter for them to sign and a copy of the interview questions (Appendix J and K). Participants were told that they would be asked to express their experiences as completely and thoroughly as possible and that they could stop the interview at any time if they felt uncomfortable.

Second, interviews were conducted on weekdays at a quiet conference room or staff offices at the universities. Participants reviewed their schedules with the staff at the support services centers to find convenient times for the interviews. It took several weeks to schedule the students' interviews because they had full schedules with only short breaks during the day, or it was an exam period. Interviews started with a greeting to thank participants for participating in the study and to explain again the purpose of the study. Then some general questions were asked to make them feel comfortable.

Third, during the interviews, the researcher considered some steps to maintain control and enhance the quality of the responses: (a) knowing what information was needed, distinguishing targeted responses from irrelevant ones, (b) using specific questions to get related answers, (c) listening closely to assess the quality and relevance of responses and to ensure the responses provided answers to the questions asked, and (d) providing appropriate verbal and nonverbal feedback to the participants (Patton, 2002). All interviews were recorded using two

devices and transcribed verbatim. Each interview lasted 45-120 minutes. In general, the interviews went smoothly, and all interview questions were answered.

Then, after each interview, the researcher reviewed the notes taken to make sure they were written logically and to clear up any ambiguity. If something was not clear in the recording or in the written notes, the researcher checked with participants for clarification, including by text or telephone (Patton, 2002).

Fourth, the audio files were transferred to a secure folder on a password-protected computer immediately after the interviews. The interviews were translated and transcribed from Arabic to English. The audio files were deleted after they were transcribed. Only the researcher and the supervisor had access to the transcribed interviews. The transcripts will be kept in the academic advisor's office for three years after completing the study. Participants had an opportunity to participate in a member-checking to discuss the themes and subthemes of the results. Member-checking was used with the participants to verify the final summary of the study findings and themes.

### **Data Analysis**

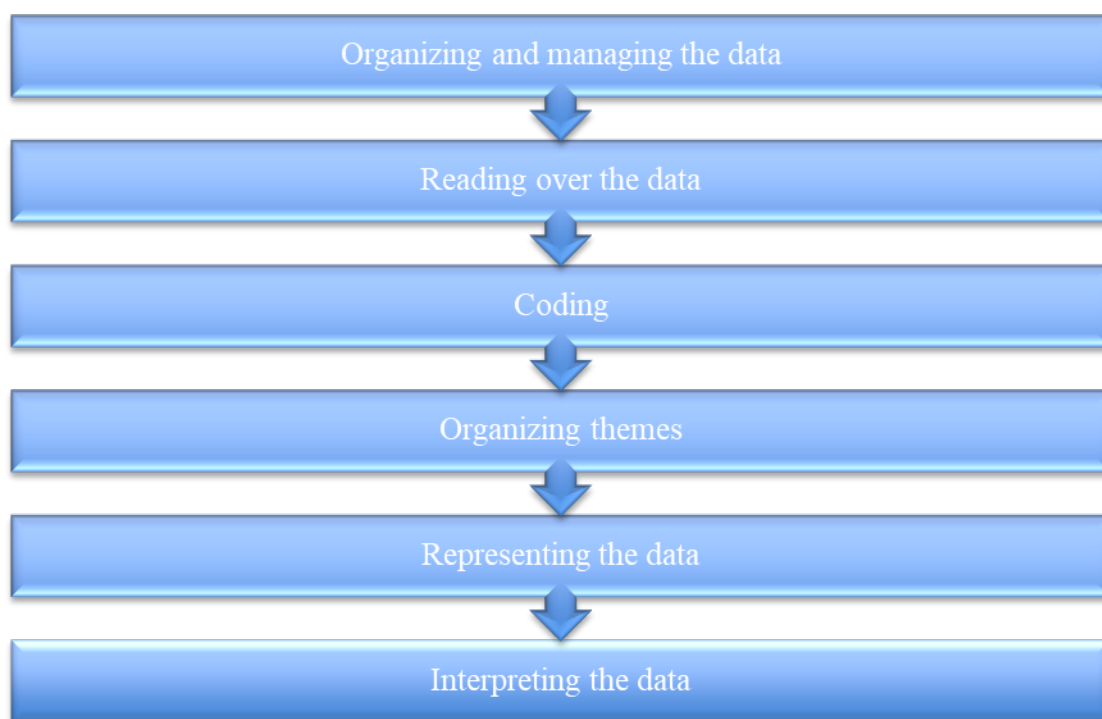
The next phase after completing the data collection was data analysis. "Phenomenological analysis seeks to grasp and elucidate the meaning, structure, and essence of the lived experiences of a phenomenon for a person or group of people" (Patton, 2002, p. 506). Data analysis includes several processes such as organizing and managing the data, reading over the data, coding, organizing themes, representing the data, and interpreting the data (Creswell, 2013; see Figure 1).

The data collected in this study were transcribed from audiotapes and translated from Arabic to English. The researcher is fluent in both languages, and the researcher became more



familiar with the data while transcribing the data (Creswell, 2013; Marshall & Rossman, 2016). The researcher created a Microsoft Word file for each participant, comprising the transcript and the researcher's notes. Each of these files was saved in a secure file on the researcher's computer.

Software programs for qualitative analysis have become very common; they help researchers organize, arrange, and seek information in text databases (Creswell, 2014; Richards & Morse, 2012). For the first step in data analysis, the researcher used NVivo (a computer software program) to organize and analyze the data. NVivo can organize and analyze text data, including interviews and notes. The researcher created two files, one for students with LD and another one for staff participants.



*Figure 1.* Data analysis process (Creswell, 2013).

Second, the researcher read and reread the transcripts to take a closer look at the data, give attention to important details, create new understandings about their meaning, and develop an overview of the ideas participants provided and the tone they used to highlight significant statements (Creswell, 2014; Saldaña, 2011). The first reading was used to develop the coding classifications. While working with the transcripts, the researcher wrote additional notes and memos.

Third, the researcher started the coding process by reducing information, finding similar topics, important statements, and related quotes, then organizing and gathering them under several classifications. Then the researcher created labeled files for each code. Codes can be words or short phrases that appeared during reading and rereading the transcripts. After creating these labeled files with specific topics for coding, the researcher wrote a summary of each code. Rereading the transcripts and going over them several times was crucial to start the formal coding in a logical way (Creswell, 2013; Patton, 2002).

Fourth, the researcher linked and grouped the statements and codes to create major themes and subthemes and to understand meaningful segments (Creswell, 2013). Fifth, the researcher wrote a detailed description of what the participants experienced with their learning disability at the universities from both student and staff member perspectives, providing examples and detailed descriptions of all themes and the connections between themes.

In the sixth and last step of data analysis, the researcher interpreted the findings, capturing the meaning from the experiences of students with LD and linking what the researcher had learned from the phenomena to the literature (Creswell, 2013; Creswell, 2014).

### **Trustworthiness**

According to Leung (2015), the meaning of validity in quantitative research refers to

“the appropriateness of the tools, processes, and data” (p. 325). Several strategies can be used to validate the findings during the process of the study. Creswell (2013) stated, “I consider validation in qualitative research to be an attempt to assess the accuracy of the findings, as best described by the researcher and the participants” (p. 249). For achieving the validity of this study, the researcher used reflexivity, member checking peer debriefing to ensure the credibility, and the researcher used code-recode strategy to enhance reliability of the study.

Reflexivity is an important characteristic of qualitative research (Creswell, 2013; Merriam & Tisdell, 2015). “It is important that the researcher not only details his or her experience with the phenomenon but also be self-conscious about how these experiences may potentially have shaped the findings, the conclusion, and the interpretations drawn in the study” (Creswell, 2013, p. 216). It was essential for the researcher to be neutral, isolated from previous knowledge and experience of the phenomena, with all biases, beliefs, and values that relate to the phenomena removed, to be able to focus more on the data (Creswell, 2013). The researcher was the primary instrument for data collection and data analysis. During the data analysis, the researcher strove to be impartial and avoided personal attitudes or biases (Creswell, 2013).

Member checking is a process of providing participants with copies of a summary of the major themes and subthemes the findings and allow the participants to ensure the accuracy of the findings. Member checking allowed the researcher to seek feedback from the participants when it was needed. It was used to produce clear and meaningful transcripts, which helped the researcher to write a full transcript, seek explanation and clarification, create a massive background of information, and it was the most essential strategy to establish credibility of the study (Creswell, 2013; Lincoln & Guba, 1985; Richards, 2014; Simon & Goes, 2011). The final summary of the major themes and subthemes in the findings was sent to each participants to review and seek the

accuracy of the findings.

Peer debriefing is an important and helpful technique to enhance accuracy and credibility in qualitative research (Lincoln & Guba, 1985). This process includes finding colleagues who hold unbiased opinions about the study to ask questions about the study. Creswell (2014) stated, “this strategy involving an interpretation beyond the researcher and invested in another person adds validity to an account” (p. 252). The researcher provided the interview transcripts without names or personal information to two qualified colleagues who had HSIRB training and experience with qualitative research. During two meetings with these colleagues, they reviewed the interviews’ transcripts in order to discuss the data analysis, the coding, the emergent themes and the level of similarities with the researcher’s themes and findings. According to Creswell and Miller (2000), “peer debriefing is best applied overtime during the process of a study, peer debriefers can offer written feedback to the researcher or simply serve as a sounding board for ideas by seeking the assistance of peer debriefers, researcher adds credibility to a study” (p. 129).

Moreover, to increase the reliability of this study, the researcher conducted a code-recode procedure on the data to assist in obtaining more understanding of data and develop the narrative presentation of the participants. Two copies of the files from all the interviews were created. After the first coding, the researcher waited for two weeks and then recoded the same data to compare the results (Anney, 2014; Krefting, 1991).

### **Limitations of This Study**

The following limitations to this study should be considered when interpreting the results. Data collection methods in phenomenological studies involve “in-depth and interviews with participants” (Creswell, 2013, p. 81). Thus, studies usually depend on small sample sizes. This study focused on a small number of participants (10) at two public universities in Riyadh.

Therefore, the results may not be generalized to other students with different disabilities, such as students with hearing or visual impairment or autism, or to students who did not receive support services from the support center. However, the aim of the phenomenological study is not a generalization, but it is to understand the phenomena.

Second, the population of this study was drawn from Riyadh and not from the whole society of Saudi Arabia, so the findings cannot be generalized for other students with LD who live in different cities or small towns that might have limited access to support services centers. Third, this study was limited to female participants, so the results cannot be generalized to male students or staff members of the support services centers at universities. However, the experiences shared by the participants provide valuable information toward understanding their experiences, including what challenges they face, the strategies they use, and their recommendations to improve support and services for them.

### **Summary**

This study aimed to explore the challenges confronting students with LD who receive assistance from support service centers at S.A. universities. Also to discover the strategies and skills students used to overcome these challenges and their suggestions for developing such services. This chapter focused on the methodology used in this study to collect and analyze the data. The researcher presented the qualitative method and its benefits and limitations, then discussed the selected type of qualitative research, phenomenological research design. An in-depth, face to face, semi-structured interview was used to gather information from the participants. The researcher provided details descriptions of the study participants and study setting. The process of data collection and data analysis steps were presented in detail. Finally,

this chapter addressed the strategies used to ensure trustworthiness and discussed the limitations of this study.

## CHAPTER IV

### RESULTS

This chapter provides an overview of the purpose and research questions. It presents a description of the study participants, and the themes that emerged from the study data.

The purpose of this qualitative phenomenological study was to explore challenges and obstacles confronting students with LD who receive assistance from support service centers at S.A. universities. In addition, the study took a closer look at the strategies and skills students used to overcome these challenges, and it reviewed their recommendations and suggestions for developing such services. A semi-structured, in-depth, face-to-face interview to gather data was conducted with 10 participants.

The research questions for this study were: (1) What are the challenges students with LD face at the beginning and during postsecondary education? (2) What strategies and skills did the support services staff and students with LD find effective in overcoming challenges during postsecondary education? (3) What do students with LD and support staff recommend to improve services?

#### **Participant Demographic Information**

There were ten participants in this study (n=10): four female undergraduate students with LD and four female employees of the support services center at University A, and one female undergraduate student with LD and one employee of the support services center at University B. Participants were identified by a system of three-digit codes. Each code included the university

(A or B), participant status (S = student; E = employee), and a number for each participant (see Tables 10, 11, and 12).

**Table 10**

*Participant Demographics (Students and Employees)*

University	Student	Employee	Percent of participants
A	4	4	80%
B	1	1	20%
Total	5	5	100%

**Table 11**

*Participant Demographics (Employees)*

Employee	Age	Level of education	Major	Years of experience
AE1	40-60	Ph.D.	Special education, hearing impairment	20
AE2	25-40	Ph.D.	Special education, learning disabilities	10
AE3	25-40	Bachelor's	Autism, behavioral disorders	4
AE4	25-40	Bachelor's	Special education, learning disabilities	8
BE5	25-40	Bachelor's	Islamic Studies	7



**Table 12***Participant Demographics (Students)*

Student	Age	Bachelor's	Major	Failing classes	Economic status	Parent's education	
						Father	Mother
AS1	20	Level six	History	No	Moderate	Bachelor's	Bachelor's
AS2	23	Level six	Special education	No	High	Elementary	No certificate
AS3	21	Second semester	Administrative sciences	Once, three classes	Moderate	Elementary	High school
AS4	21	Third semester	Linguist English	No	Moderate	Bachelor's	Bachelor's
BS5	20	Fourth semester	Public relations	Once, one class	Moderate	Ph.D.	Bachelor's

**University A**

University A, inaugurated in 1970, began with a few colleges then expanded until today, when it comprises 102 colleges in Riyadh and 72 other cities in Saudi Arabia. It has 41,441 students. University A, which is under the supervision of the Ministry of Higher Education, and has six main colleges in Riyadh: The College of Education for literary sections, the College of Education for scientific sections, the College of Teacher Education, the College of Social Work, the College of Home Management, and the College of Arts.

***Support Services Center at University A***

The support services center serves students with disabilities, such as students with learning disabilities, attention deficit disorders, hearing or visual impairment, physical disabilities, and students with chronic diseases. The support center's services include academic, social, physiological, and technological services. The center assesses students' academic needs, provides support sessions (peer tutoring), documents the need for academic accommodation

(statement letter), offers consultation services for faculty members, and conducts training courses and workshops for students with disabilities. To be eligible for the services, students must provide documentation, such as a copy of their ID, a high school certificate, a diagnosis report, and be interviewed by a staff member. The support services center at University A assists 141 students with various of disabilities (see Table 13).

**Table 13**

*Students and Types of Disabilities at the Support Services Center at University A*

Type of disability	Number of students
Physical disabilities	42
Hearing impairments	14
Visual impairments	19
Learning disabilities	18
Chronic diseases	39
Communication disorders	6
Other disorders	2
Total	141

## **University B**

University B, established in 1950, comprises 11 colleges, including five in Riyadh: The College of Computer and Information Sciences, the College of Social Sciences, the College of Medicine, the College of Economy and Administrative Sciences, and the College of Media and Communication. There are 135,538 students enrolled at University B.

### ***Support Services Center at University B***

The support services center at University B serves students with disabilities, including physical disabilities, hearing and visual impairment, and learning disabilities. The center provides academic support and consultation for students with disabilities and a database for students with disabilities. It fosters appropriate learning environments and suggestions for modifying the environments to make them adequate for the students' needs. It promotes

awareness about all types of disabilities, contributes to research to improve the center and its services, works to engage students with disabilities in culture and sports activities, and publishes periodic reports about the center's outcomes. The support center serves 112 students with disabilities, including 40 students with visual impairments, 17 students with hearing impairment, 35 students with physical disabilities, three students with learning disabilities, three students with muscular sclerosis, and 11 students with other health issues (see Table 14).

**Table 14**

*Students and Types of Disabilities at the Support Services Center at University B*

Type of disability	Number of students
Physical disabilities	35
Hearing impairments	17
Visual impairments	40
Learning disabilities	3
Muscular sclerosis	3
Other disorders	11
Total	112

### **Profiles of Participants**

#### **Student AS1**

AS1 is a 20-year-old history major in her sixth semester at the university. She comes from a large family with five siblings. Both of her parents have bachelor's degrees. She said that when she was young, her parents took her to the hospital because she had Phenylketonuria (PKU). An American psychologist predicted that she might have learning disabilities in math because she could not do basic math games or play well with blocks. However, she was not diagnosed with LD before first grade.

In elementary school, she stated, "I felt lost and did not know what was wrong with me." She went on, "[my] teachers noticed that my grades were good in most subjects except math and Arabic language." During a meeting, AS1's teachers discussed this issue with her mother and

asked her mother if there were any problems at home or any circumstances that could cause these difficulties. One teacher told her mother that her daughter might have learning disabilities and advised her to visit a public special education institution to get a diagnosis. She said, “I had several tests and assessments, then they diagnosed me with learning disabilities in math, reading, and writing and said I should receive special education services, such as reducing the quantity of the subjects and facilitating exams.”

AS1 moved to another public elementary school which had a resource room. She explained that she learned some strategies for math, reading, and writing, and her grades improved. She continued to use these strategies in middle and high school. AS1 found that middle school was a little harder and not all teachers knew about learning disabilities. Teachers thought she did not have a disability because she looked normal. AS1 described her teacher at the resource room in middle and high school: “She was helpful, very helpful, she helped me and helped other students and gave us strategies to use.” Also, her teacher used to attend her classes and help her to identify her strengths and weaknesses.

When AS1 entered high school, there was a resource room, but the school closed the room because of the small number of students with LD. So AS1 moved to another high school that had a resource room and special education programs for hearing, visual and learning disabilities. Her resource room, teacher at the new high school attended her math and language classes to support her.

When AS1 graduated from high school with 89% (a B average), she electronically applied to the university to get a higher education degree in history. Unfortunately, she was not accepted. So she applied manually, and the university requested a personal interview. “I did the interview, and they advised me to take elective classes in special education.” She was aware of the support

services center during the first semester and took advantage of their services. She provided all the required documents to receive the support services. She provided with a statement letter from the center to show to her teachers. The letter included information about the accommodations she needed, such as extra time for exams and assignments, private room for exams, personal reader, peer tutoring, divide the exam small quizzes, adapt curriculum and evaluation method and separate table for tasting.

AS1 had been socially active; she participated in or volunteered for several events. During the interview, she was confident about sharing her experience. She was the only student who had a transition plan for elementary, middle, and high school. Her transition plan was valuable and helpful because it had information regarding her diagnosis, goals, recommendations, a summary of her performance, and her strength points that helped her on her educational journey to the university.

### **Student AS2**

AS2 is a 23-year-old senior majoring in special education. She comes from a large family and with ten siblings. Her father holds an elementary certificate, but her mother does not hold an educational certificate and she is a housewife. She was recently diagnosed with a learning disability, as she said, “This semester, I cannot handle this anymore or control it, it is enough I should have a diagnosis.” She has struggled academically since she was in elementary school. AS2 repeated the first grade once because she did not pass her tests and her family agreed to let her repeat first grade since she had not attended kindergarten. She faced difficulties and challenges during elementary and middle school. “I know it. I had something wrong since I was young, but I had a strong personality, and I do not want anyone to say I am stupid.” She received some support from her teachers in fifth grade because “I had spelling and grammar mistakes,

reading problems. For example, I cannot understand what I read or know the meaning of some words, and I cannot answer the verbal questions.”

In middle school, she did not reveal her struggles with reading or writing. When AS2 studied for an exam, she memorized the information to answer the questions “I did not understand; I memorize the information. It is like a copy and paste. It took days from me to study because I just memorize.”

AS2 studied at a private high school; she confessed that most of the students including herself used summaries of books or study guides for the exams, and they rarely used books the whole book for studying. She knew the most common questions that would come up on an exam. She had 99% in high school because the exams were easy, and she had the study guides for all the exams. She faced difficulties in writing essays, but she stated, “No one knows I had LD in high school.”

AS2 has anxiety and her anxiety increased when she enrolled at the university. The beginning of the first year was very hard for her. She explained:

In the first year, I had a lot of classes and projects. I did not know how to do that. In high school, we did not do these types of assignments or projects, and we did not have adequate and enough knowledge. It is a different system at the university. I faced difficulties at the university.

AS2 studied and prepared for exams by memorizing the information. However, she discovered her study method did not work well and it was not effective at the university level. Her GPA dropped, and her self-esteem fell. So she asked her professor at the special education department for an evaluation of her problem; her professor advised her to go to the support services center.

The center recommended she have an assessment from a nonprofit learning disabilities organization. She received documentation of her diagnosis stating she had a learning disability in reading and writing. She was good in math and did not face any difficulties with numbers. SA2 explained she always had a problem with starting her assignment or projects, and it was normal for her to spend seven hours thinking about an introduction. She wanted to study administration because she enjoys managing and organizing events, and she wanted to be a businesswoman. However, she said, “But I was dreaming of studying special education.” So, she is majoring in special education and specializing in autism.

AS2 provided with a statement letter included information about the accommodations she needed, such as extra time for exams and assignments, divide the exams to small quizzes, adapt curriculum and evaluation method, faculty check for comprehension, and private room for exams. SA2 is a social person, has good friendships, and is very confident.

### **Student AS3**

AS3 is 21 years old and her major is administrative sciences. She received her diagnosis during her second semester at the university from a special education organization. She has a learning disability in writing, reading, and math.

AS3 has two siblings, a brother and a sister. Her mom holds a high school certificate and is employed at the same university AS3 attends. Her father holds an elementary certificate. AS3 talked about her struggles in elementary school saying, “Maybe my teachers did not treat me well.... I hated reading, writing, and spelling. My Arabic class teacher was very strict, I always cried and was scared. I moved to several schools and lived in different neighborhoods.” She repeated the first grade twice. AS3 faced difficulties in reading: “When I read, I see the letters different, I add extra letters.” She said that her teacher forced her to read, but her reading was not

accurate, so she did not participate in the reading class, and her classmates described her as a “lazy and stupid student.” “My teachers started to feel I am struggling in my classes.” AS3 did not get a diagnosis in elementary school because the teachers tried to help her and pushed her to pass her classes and finish elementary school.

In middle school, her mother noticed that she was struggling and her problem increased, especially with new and different classes, such as English. Her mother supported her and taught her at home. AS3 had good friends in middle and high school who always helped her, studied with her, and helped her with her homework. She was bullied in high school, and her classmates laughed at her because she did not read accurately and did not participate in class.

She depended on her mom in the earlier phases of her life. Then she started to think about being independent at the university. She said she was committed to study and work hard in order to get a degree and help her mother. Talking about her beginning at the university, she said, “When I entered the university, everything was different. I felt lost with the classes and assignments. I did not pass three classes. My GPA dropped to one.” AS3 saw an advertisement about the support services center and told her mother about it. However, she said, “My mother did not know about the center and its services. She was surprised.” She went to the support center to seek help. “I saw they assist students and give support sessions; the staff were very cooperative.”

Although AS3 was a shy and quiet student, she was willing to share her experience. She has few friendships and one close friend. She used the support services center because she found it helpful and beneficial to her. The services were extra time for exams and assignments, reducing the assignments and class activities, providing the evaluation criteria to the student



prior to assignment or activities, adapting the format of exam questions, avoiding questions or feedback during presentation, and dividing exams to small quizzes.

#### **Student AS4**

AS4 is 21 years old, majoring in English linguistics in her third year. Both of her parents hold bachelor's degrees and she has one brother. AS4 studied in private elementary, middle, and high schools. AS4 had delayed speech when she was around four or five years old. The private hospital evaluated her and predicted that she might have learning disabilities. However, she did not get an LD diagnosis from the same hospital until age 13, and she did not receive an intervention or special education support until she enrolled at the university. She said:

In third grade, I started having difficulties in math, science, reading, and spelling. My teachers contacted my mom; they were very cooperative, gave my mom the homework and extra exercises to help me with spelling, there was not a resources room in my elementary school.

AS4 started to face problems with her classes in middle school. She struggled with reading, math, and sciences such as biology, chemistry, and physics. AS4 said that teachers treated her like a normal student, and that she received private tutoring sessions with a tutor almost every day to assist her with her homework. AS4 said:

In high school I faced obstacles, I could not understand when the teacher explained, and I asked her to repeat and explain, but still, I could not understand, I struggled with the proficiency exam [required for enrollment at a college or university], and I took several preparation courses and workshops. My GPA was low—60%. I was shocked.

She explained that in the private high school they studied from summaries of books (handouts that included the most important information in the books). She said her English teacher inspired her and she was “obsessive of English and had a strong desire to enroll in the

university.” AS4 is self-motivated, she teaches herself during the summer, and she increases her English vocabulary by watching English movies and YouTube.

When AS4 started her classes at the university, she had low grades, unaware of the grading system or the courses, “I tried hard to adjust to the new situation.” She faced difficulties with one professor during the lectures, “I cannot follow her; she is talking very fast.” AS4 looked at the university website with her mother to seek help. She found information regarding the support services center and she sought out support. AS4 received several services from the center, such as extra time for exams and assignments, private room for exams, personal reader, adapt curriculum and evaluation method, large font for questions, separate table for testing, extra support in English, and adapted class requirements. AS4 is very calm student, shy and she has few friendships.

#### **Student BS5**

BS5 is 20 years old, studying public relation in her second year at the University. She was diagnosed with learning disabilities in reading and writing at a private psychological center when she was in third grade. BS5’s father is a professor at the same university, and her mother is a housewife and holds a Bachelor’s degree. Her father encouraged her and helped with her homework and exams at school and at the university. BS5 has three siblings two sisters and one brother. She mentioned, “I received support from the resource room in elementary, middle, and high school. They helped me with questions and writing. I received support for all classes in elementary school.”

BS5 wanted to enroll in the university. She turned to her father and discussed it with him because he works at the university, “I told my father I wanted to study and continue my education at the university, he helped me to enroll and choose my major.” BS5 started her

journey at the university, which she described as a “big and new environment.” She said, “I did not know the places, I did not know how to go to my classes or to the cafeteria.”

BS5 is a friendly and little bit shy student. BS5 had few friends in elementary, and secondary school. However, the situation changed at the university. “Now I have more friends, and I hang out with them.” She stated that her friends support her with her classes and assignments, and she has good relationships with her friends. BS5 found support from her friends and the center helped her to build new friendships at the university, as well as the environment at the university allowed her have opportunity to meet new friends.

BS5 received services from the support center including, extra time for exams and assignments, private room for exams, adapt curriculum and evaluation method, faculty check for comprehension, and ensure in –class participation in activities.

Participants in this study were diagnosed with LD in different phases of their lives. Some of them were diagnosed in elementary school, some in middle school, and some after enrolling in the university. Some students did not receive any special education services or an Individual Education Plan (IEP). See Table 15 for more details.

**Table 15***Types of Learning Disabilities and Times of Diagnosis and Receiving Services*

Students	Time of diagnosis	Support services initiated	Area(s) of learning disability
AS1	First grade	First grade	Math, reading, and writing
AS2	Fourth semester University	Fourth semester University	Reading and writing
AS3	First semester University	Second semester University	Math, reading, and writing
AS4	Middle School	First semester University	Math, reading, writing, and science subjects such as biology, chemistry, and physics
BS5	Third grade	Third grade	Reading and writing

**Employee AE1**

AE1 is an associate professor and the director of the support services center at University A. She holds a Ph.D. and a Master's in Psychology and a Bachelor's in Special Education, specializing in hearing impairment. AE1 has almost 20 years of experience in the special education field, two years at a previous public university and 17 years at University A. AE1 teaches several classes for graduate and undergraduate students.

AE1 has professional memberships in approximately 20 committees and organizations. AE1 has held several positions during her career, and she presented several courses and workshops. She created training programs in special education and in related areas, such as research, professional development, technology, and teaching strategies at the higher education level. AE1 has received several honors and awards for her work, published several articles, and participated in university seminars.

**Employee AE2**

AE2 is an assistant professor at University A. She holds a Master's and Ph.D. in Special Education from the United States of America. She received her Bachelor's degree from a Saudi university in special education, specializing in learning disabilities. In addition, AE2 focused on post-secondary education and students with learning disabilities in her research and studies. AE2 has approximately ten years of experience in the special education field. She worked as a vocational rehabilitation counselor at a rehabilitation hospital. AE2 was the director of the support services center for two years, and is the chairperson and instructor in the special education department at University A. She is a committee member for the support services center. AE2 has participated in several national and international conferences related to the special education field.

**Employee AE3**

AE3 is an employee at the support services center University A. She holds a Bachelor's in Special Education focusing on autism and behavioral disorders. AE3 has four years of experience in the special education field. She has one year of experience in an autism center and three years at the support services center. She is responsible for 35 students, including students with learning disabilities. She provides the students with the needed support, such as required documents and statement letters, and she arranges for peer tutoring and private rooms for exams.

**Employee AE4**

AE4 is an employee at the support services center University A. She holds a Bachelor's in Special Education with a focus on learning disabilities. She has eight years of experience. She worked at a private school as the assistant administrator for four months, worked at a bank for one year, then she started working at the support services center at University A. She is

responsible for 35 students with disabilities, including students with learning disabilities. She also prepares statement letters and communicates with the faculty members about the needs of students with disabilities.

### **Employee BE5**

BE5 holds a Bachelor's in Islamic Studies. She has seven years of experience at the support services center at University B. BE5 works with students who have visual, hearing, physical disabilities, and learning disabilities. She supports students by providing equipment and materials, preparing reports, and facilitating exams. BE5 also communicates with professors about issues regarding students' needs.

### **Presentation of Themes**

This study was organized around three research questions. Five themes and ninety sub-themes emerged during the data analysis of ten interview transcripts. The five themes were: (a) pre-university challenges, (b) academic challenges, (c) social and emotional challenges, (d) support, and (e) suggestions (see Table 16).

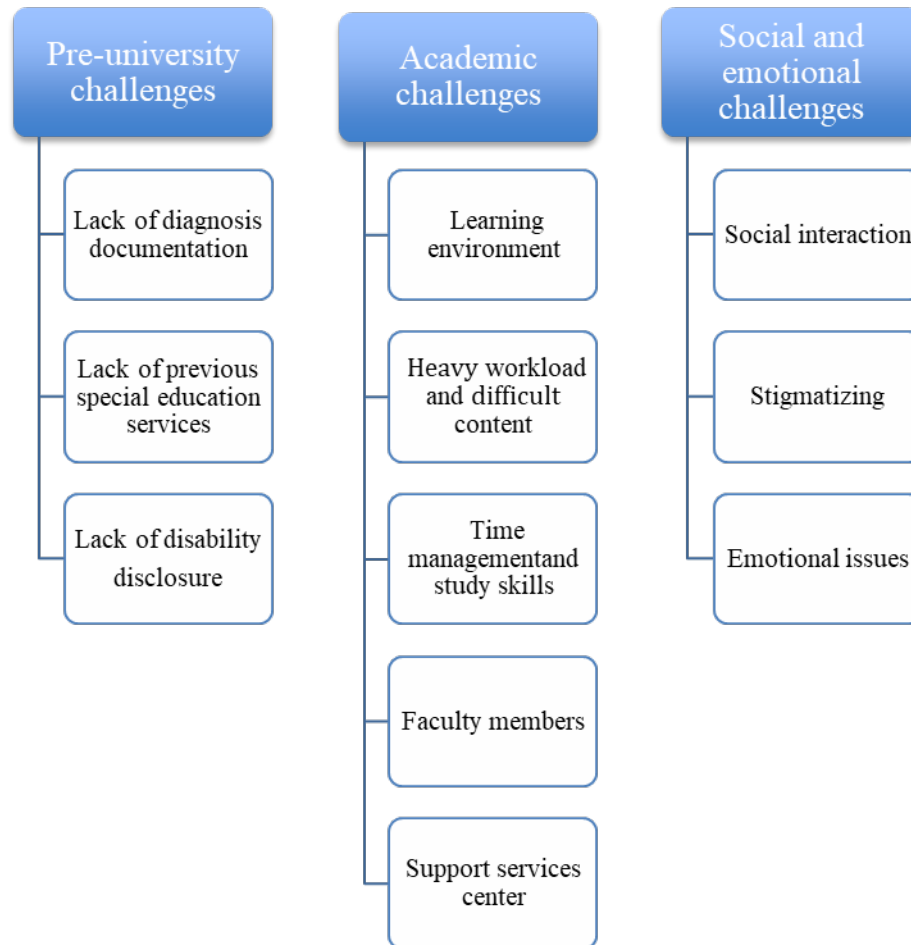
**Table 16***Summary of Results*

Research question	Theme	Number of responses	Sub-theme
What are the challenges students with LD face at the beginning and during postsecondary education?	Pre-university challenges	26	(a) Lack of diagnosis documentation (b) Lack of previous special education services (c) Lack of disability disclosure
	Academic challenges	71	(a) Learning environment (b) Heavy workload and difficult content (c) Time management and study skills (d) Faculty members (e) Support services centers
	Social and emotional challenges	69	(a) Social interaction (b) Stigmatizing (c) Emotional issues
What strategies and skills did the support services staff and students with LD find effective in overcoming challenges during postsecondary education?	Support for students with LD	82	(a) Accommodations and academic support (b) Strategies and skills (c) Social and emotional support (d) Factors that enhanced students' success
What do students with LD and support staff recommend to improve services?	Suggestions	69	(a) Awareness (b) Transition and online documentation system (c) Teamwork and diagnostic services (d) Support sessions, workshops, and vocational training.

**RQ1: What Are the Challenges Students with LD Face at the Beginning and During Post-Secondary Education?**

The first research question in this study addresses the challenges students with LD face at the beginning and during postsecondary education. Participants' responses to this question

followed three main themes (a) pre-university challenges, (b) academic challenges, (c) social and emotional challenges (see Figure 2).



*Figure 2.* Major themes and sub-themes related to research question one

### **Pre-University Challenges**

Eighty percent of the participants four students and four staff (AS1, AS2, AS3, AS4, AE1, AE2, AE3, and BE4) agreed on pre-university challenges students encounter before receiving support services. This theme described the problems and difficulties facing the students before receiving services or accommodation and affecting their academic performance. These issues include: (a) lack of diagnosis documentation, (b) lack of previous special education



services, and (c) lack of disability disclosure. Each of these issues described an essential factor preventing the students from seeking or receiving appropriate services at the university. For example, students and staff discussed issues related to obtaining legal documentation for learning disability identification and how the timing of such documentation affected their success. Many participants found special education services were limited and rare at the secondary level. Finally, students gave several reasons for not revealing their LD and seeking support services at the university. These three issues are discussed in detail, including direct quotations from the participants' responses.

### ***Lack of Diagnosis Documentation***

Eighty percent of the participants three students (AS1, AS2, AS4), and five staff members (AE1, AE2, AE3 AE4, and BE5) identified difficulties related to the evaluation and diagnosis documentation for students with LD. The essential step before receiving appropriate special education services was an accurate diagnosis. Diagnosis documentation can facilitate receiving appropriate and adequate post-secondary educational services. However, lack of such documentation, including diagnosis reports, IEPs, a summary of performance at previous schools, and evidence of previous services, would delay eligibility for receiving post-secondary educational services.

The two support services centers would not accept students or offer services without diagnosis documentation. According to the participants in this study, only two of the five students had diagnosis documentation at the elementary school. For example, AS1 was diagnosed with learning disabilities in writing, reading, and math in first grade. She also was the only student who had a transition plan through the three educational phases elementary,

secondary, and high school. However, AS2 said that she repeated first grade twice, and she did not have a learning disability diagnosis until she enrolled in the university.

Four of five staff members stressed that a lack of diagnosis documentation was a considerable problem for students when they enrolled at the university. Most students did not have a diagnosis or legal documentation for their learning disabilities. BE5 said, “Students came without diagnosis or report.” Another staff member, AE2, stated “Evaluation and diagnosis! We have a problem with that. We do not have diagnosis and assessment tools.”

In addition, even if students have documentation, it might be inadequate or include limited and old information about their diagnosis and the services provided to them. AE2 remarked, “Even with the students’ evaluation or assessment [report], the information is not enough.” She emphasized the assessment tools used in some nonprofit learning disability organizations were not age appropriate for college students because these organizations use assessments for elementary or secondary school students.

The lack of such documentation can be connected to the parents’ and/or teachers’ awareness and knowledge about learning disabilities. For instance, BE5 mentioned, “Sometimes a mother becomes an obstacle in front of her daughter.” She explained, “One mother refused to accept that her daughter needs an assessment, and she said: ‘No, my daughter is normal, nothing wrong with her we cannot do anything with them.’” Teachers might not be aware of the impact of learning disabilities and restrict the definition to physical disabilities or cognitive impairment. AS1 struggled with her teachers in middle and high school because of their lack of awareness about learning disabilities. She stated:

In middle school, it was a little hard. The teachers were different. Not everyone knew LD, they said, “She does not have LD; it does not show on her face that she has LD.”

Even in middle school when my mom told them, they said, “Do not lie; your daughter is normal, and her appearance does not show anything. Your daughter is lying!” They said, “Do not spoil her; she does not need anything.”

AS3 explained that her mother, an employee of the University she was attending, was surprised when AS3 told her about the support services center at the university. Even though her mother had been working at the university for a long time, she was not aware of the center and the services provided to students:

When I told mom about the center, she did not know about it even though she works here, but she said, “Are you joking? There is something like this? No, there is no center; it is impossible!! I have never heard of it.”

### ***Lack of Previous Special Education Services***

Half of the participants three students (AS2, AS3, AS4) and two staff members (AE2, BE5) discussed the lack of special education services and the connection to the lack of documentation. For example, student AS3 repeated first grade twice and moved from school to school looking for support or a school that had special education services. AS3 stated, “When I was in elementary maybe the teachers did not treat me well or did not treat me right... I moved to several schools and different neighborhoods.” AS2 said, “No one treated me for learning disabilities.” Another student mentioned her teachers collaborated with her mother to assist her in Arabic and dictation, but she did not receive any special education services in elementary or secondary school. AS4 said, “[Teachers] gave my mom homework to help me with spelling, there was no resource room in elementary. I started to face problems in middle school. They did not treat me well. They treated me like normal students [ students without learning disabilities].”

One staff member of the support services center BE5 said, “Some students did not receive services in high school.”

AE2 pointed out there were weaknesses in special education services at the secondary level, and these weaknesses contributed to the difficulties experienced by students with LD at the post-secondary level. For instance, AE2 emphasized that teachers at the secondary level were not providing adequate services for students with LD or developing appropriate IEPs. In addition, there was a lack of transition services for students with LD. She added:

There are no specific or intensive educational practices used to prepare students for college-level. They did not work on this step, and the IEPs were not active in previous stages.... For me, I see a missing link, which is transition services, it has existed in school, but they are baby steps and reasonable efforts, but it is still at the beginning, and it does not efficiently take its turn.

### ***Lack of Disability Disclosure***

Three students shared their perspectives about the challenges that arose when they tried to share their learning difficulties. The students were concerned about self-image and peer perspective, so they did not reveal their learning disabilities. Disclosing their learning disabilities could help the students to succeed, but most of the students participating in this study did not disclose their academic struggles or difficulties. For example, AS2 said, “No one knows about my LD, not even mom or dad. Only two of my sisters know.” She explained her reasons for hiding her LD: “I do not want anyone to say I am stupid... I do not like someone to teach me or explain to me.” AS3 said, “No one knows about my LD. I do not like to show people that I have an LD because I do not want people to look at me and feel sorry for me or look at me in a pathetic way.”

The director of the support services center, AE1, pointed out different reasons that may lead people to conceal their learning disability. She emphasized, “Most of the students who were accepted did not show they received special education services at previous times.” She explained the conditions for acceptance or the procedures for students with a disability at the university would prevent them from enrolling or cause a delay in the acceptance, so they chose to not disclose their learning disability. Accepting a student with a disability takes longer, as AS1 described the whole procedure for enrolling at the university:

After I graduated from high school, my GPA was 89%. I applied electronically, but I did not get the acceptance, so I went to the university to apply manually. They sent the approval to my mom, but I had to do the interview. I did the interview. I chose history, because I love history and they advised me to take elective classes in special education, then I got the acceptance.

AS3 hesitated to go to the center because of the fear of the stigma related to having a learning disability. “They [staff at the support center] always call me to come and I refused because I did not want anyone to know about it. I was scared.” Some students knew there was something wrong with them, but they did not seek help or ask for support. AS2, AS3, and AS4 hesitated to share their struggles or needs for help with parents, friends, and university administrators. Of the five students taking part in this study, AS1 was the only one who was confident in disclosing her learning disabilities. This seemed to be due to the fact that AS1 has adequate knowledge and awareness about her learning disabilities. Also, she has support and encouragement from her parents.

## **Academic Challenges**

The second theme that emerged was academic challenges. All of the participants, students and staff emphasized there are a variety of academic challenges and difficulties confronting students when they start their classes at the universality. Among the academic challenges the following sub-themes emerged: (a) learning environment (b) heavy workload and difficult content, (c) time management and study skills (d) faculty members, and (e) support services center.

### ***Learning Environment***

The learning environment at the university related to a different atmosphere, buildings, classes, curriculums, grading systems, and teaching styles. There was no comparison between what students experienced before and after enrolling at the university. Fifty percent of the participants four students and one staff member AS2, AS3, AS4, BS5, and AE1 highlighted these differences at this new level of education. For example, AS2 described her first year at the university, saying, “The beginning of the first year was a failure for me... We did not have adequate and enough knowledge. It is a different system here at the university. I faced difficulties at the university.” Both AS3 and AS4 mentioned they had poor grades and low GPA in their first semester because of the lack of knowledge and background about the university system and the new environment. AS3 stressed:

When I entered the university, I did not pass in three classes. I was lost there is an interruption, assignments, blackboard. I did not know anything on the Blackboard. My GPA is one now. It is low, and it became worst because of my LD.

AS4 said:

My grades were very low, and I had 9/20. I did not know about the university system. I did not know the grade system. There were no awareness courses or workshops to guide us. I was scared to fail and retake the classes. I tried hard to adjust to the new situation. BS5 described the campus and how it was difficult for her to navigate her classes and other campus facilities. She said, “I did not know the places and facilities at the university. It is a huge place. I did not know how to go to my classes or cafeteria; it is a new setting for me.” AE2 discussed the differences between the educational settings at the secondary and post-secondary levels:

The most significant problems that surprise the students with LD are the high requirements at the university level. It is such a surprise for them because they had different assignments and requirements in secondary or elementary school, which were not corresponding with university requirements.

### ***Heavy Workload and Difficult Content***

First year was considered a stressful and challenging year for most of the students with LD. In this study, four students and three staff members (AS1, AS2, AS3, AS4, AE1, AE2 and BE5) agreed that students were struggling with a heavy workload and the difficult content of their courses. In middle or high school, students were used to a lighter studying load and had fewer classes. AS2 stated the difference at the University:

I had a lot of classes, such as English projects, and I did not know how to do that....

Especially the massive amount of content, new terminologies, a lot of projects, I used to study a few units... the information is too much to study or memorize.

She felt it was overwhelming to handle this situation. She said that “one faculty member gives us more than our capacity.” AS3 also remarked there were several things she had to do,

and that put her under pressure. She mentioned, “Assignments, pressure, too many books, and the workload, there are many things in the book. We have to study everything without specifying.”

AE1, AE2, and BE5 shared their perspectives about the curriculum, the number of assignments, and the massive workload that students would face at the post-secondary level. For example, when I asked AE1 about the challenges confronting students with LD, she pointed out “the number of classes, the workload, and the amount of the courses. The amount of courses is a big challenge for the students.” BE5 said that students do not have cognitive problems, but the content was very heavy for the students with LD.

### ***Time Management and Study Skills***

Sixty percent of the participants (four students and two staff members) AS1, AS2, AS3, AS4, AE2, and BE5 noted that the students were challenged to submit their assignments and research papers and to finish exams on time. AE2 said time management was not only an issue for students with LD, but even students without learning disabilities were also facing this problem. She stressed, “Most of the students do not know how to manage their time, not only students with LD.” Students described the need for extra time for assignments or exams because of their slow writing or their need for help in reading questions or explaining the requirements of an assignment. For example, AS3 said:

The time is short for assignments ... I will never finish one small assignment in one day... and exams I have to stop answering when the time is done. I studied. I want to answer and I can answer, but I need someone to read the question for me, but I cannot ask the professor. I am afraid to ask. They might think I am cheating, so I waited until I read one question for one hour. All the students finished and went out except me. And the



professor said the time is almost finished you have to answer. I asked her only one question. I respect her time, and I do not want to waste her time.

AS3 also described the struggles she encountered with her daily schedule and limitations of her free time. She elaborated, “I feel lost. When I go home at 6 pm, I do not have much time to study, and during the daytime, I had small breaks; they are not enough.” Another student, AS2, said she always faces difficulties when starting her paper; sometimes she spends several hours just thinking about the beginning of the introduction. AS1 explained that she is very slow in writing, and finishing assignments was not an easy task. She said, “I took about three days to finish a small assignment.”

Students AS1, AS2, and AS3 stated they had a lack of knowledge about study skills or strategies to help them succeed in their classes. AS2 observed, “I do not know how to study for finals. I do not know what to do. I am facing emotional issues and academic issues; it is complicated.” AS2 used to depend on memorizing information for exams when she was in middle and high school. However, this strategy was not effective in higher education. “I took days to study because I just memorized. When I entered university, I continued doing it the same way, but when I started my specialization, it was different,” AS2 explained.

AS2 and AS3 had difficulties implementing concept maps for their assignments. For instance, AS2 said:

One of my professors gave us concept maps as homework for the same lecturer to help us. It was a disaster for me. For the first time, I did not do it, the second time I took my friend's, and I changed it, the third time I did it as a list. I felt there was an improvement. Concept maps helped me a lot, and I think they are for intelligent people. I face a problem when I drew several lines. I did not do it as she told us.

AS3 said she had used concept maps before, but for now, she did not find them appropriate. She elaborated:

I used to use it [concept map] in middle school. I drew circles because I could not draw a tree, so I drew circles and lines. I did not use it that much after middle school because my drawing is not perfect, and the repetition of maps makes me confused.

AS3 said that her classmates used some strategies to assist them in studying, but she found it confusing for her to use the same strategy. AS3 stated:

Some students make a connection with other things in their brains. For me, I cannot do that; it is impossible for me to make a connection. I memorized, spent hours, and make efforts until I remembered. For instance, I did not take a break, my classmate they take one. I have to accomplish this stuff. I know that will be more pressure, and it will be massive information.

### ***Faculty Members***

The teaching style at the university level is different from high school. Under this subtheme, 70% of participant four students and three staff members AS1, AS2, AS3, AS4, AE1, AE3, and AE4 discussed several issues confronting students with LD during their classes, such as the class presentations, references, and class requirements. AS1, AS2, AS3, and AS4 revealed that some instructors were not considering their academic needs nor providing the support needed. This included providing the exam questions in a large font or sending the presentation before the classes. AS1 shared her experience in class and how hard it was for her to follow the instructors and take notes at the same time, especially if the font was small. AS1 elaborated, “I cannot focus very well, especially when the professor talks fast, I need repetition to write the information down. The font size is small in some classes in presentation or exam questions.”

AS1 also discussed the teaching faculty's reaction, "I cannot follow the professor in writing during the class, so I asked her to repeat, and she thought I am joking or lying. Some professors were stubborn and did not cooperative with me, Allah forgive them." AS1 had to deal with some professors who were not cooperative and supportive. She stated:

One professor did not provide [text in a] large font or provided unclear questions, even when I told her I need a larger font and I had LD. She also did not respond to the previous director of the support center when she talked to her about my LD. She still did not respond. I passed with a D in her class.

AS2, AS3, and AS4 faced similar problems during the class. They said that some instructors spoke quickly during the lecture, there were too many presentation slides, some instructors did not provide the materials before class, and they were facing issues with the blackboard. For example, AS2 stated:

I do not like it when they start the lecture, and I do not know what they are talking about, or when they tell me to close the book. I tell them I cannot. And when I write, I do not know what I wrote. It is like a talisman. And one of the professors does not want us to record her lecture.

AS4 said, "Some professors write on the board, but their handwriting is not clear. Some of them put the slides up for a few seconds or minutes and removed them fast."

AE4 highlighted what students with LD confronted in their classes. She said, "Some lecturers are so fast in teaching, which will make the students ask for repetition... Too many slides. Students face problems with online assignments. They do not know how to use the Blackboard. They miss the [deadlines for] submitting their assignments." She pointed out that

“students with LD are struggling to follow the lecture slides, which will lead to misunderstanding and confusion. There are many of them who complain about this issue.”

AE3 emphasized that using Blackboard was not easy for students with LD, and some students had never used e-learning or online classes. AE3 stressed:

They [students with LD] struggle with the blackboard; one of the students did not know how to use it. For example, my sister used it and she said, “It helps us to increase our GPA.” Still, students with LD lose grades and fail some classes, such as Islamic studies, which are easy, because of the lack of knowledge of blackboard, and they did not know how to use it.

Based on the students’ and staff responses and their experiences with the faculty members, there were some challenges confronting them. The biggest challenge was faculty members lack of awareness regarding LD, and it led to a delay in providing the services for the students. For instance, AS1 revealed:

I faced difficulties because professors do not know about LD. They are unaware of LD.

When I told them I have LD, they said, “We did not see that you are different or your face does not show that.” Or they say, “Your way of thinking is good, you critique well.”

AE1 observed she sometimes had issues with faculty members because “they did not accept LD easily, and they did not take responsibilities in accommodations and modifications in their courses. It is not easy to convince them.” She went on, “There is a lack of awareness about special education in general and especially about LD. They do not know about LD. They think the student is careless.” She identified one faculty member who refused to cooperate with the student or allowed her to take the exam in a private room or provide extra time. AE1 stressed these situations happen for three reasons: (a) students did not know their rights, (b) there are no

established and written policies at the university, and (c) faculty have a lack of knowledge about LD. She said it was difficult for some faculty members to cooperate and support students with learning disabilities because a learning disability is a hidden disability, AE3 said:

We face a problem with some faculty members. They said, “These students are normal; we do not see anything abnormal with the students.” It is a hidden disability; you cannot see it. “We told them they are normal; they are no different.” They do not differentiate them from lazy students, and they do not know what to do with them. They feel it is unfair to give them exceptions or treat them differently.

AS3 shared, “Some of the faculty said, ‘What is wrong with you? We do not see that you have issues.’ So she told me, ‘You do not have a disability, we cannot see it, and there is nothing that can prove that.’”

AS2 and AS3 had experiences with some faculty members during the exams. They both asked their professors to explain some questions to them, but they refused. AS4 had a different response from her professor when she asked for a modification and it was a surprising response. AS4 described the situation that happened when she asked for an accommodation:

Sometimes the faculty member said, “I cannot help you because your classmates will feel I treat you differently. And they will notice that and ask, ‘Why does she take the exam alone?!’” There are students I do not know who asked the professor, ‘Why does she have a different exam paper?’ They are curious.

### ***Support Services Center***

Under this sub-theme, 90% of the participant AE1, AE2, AE3, AE4, BE5, AS1, AS2, AS3, and AS4 discussed several issues, including: (a) policies, (b) lack of human and financial

resources, (c) staff background about students with LD in higher education level, and (d) internships and job training.

**Policies.** AE1 and AE3 discussed the essential issue of a lack of established policies and procedures for students with LD in the university system and how this negatively affects the process of providing support and accommodation for students with LD. AE1 observed, “The center does not have authorization or confirmed policies so that I can say, ‘according to that policy...’ We need a specific list of policies to send to the faculty members.”

AE3 described the difficulties when dealing with faculty members without written policies. She said, “It looks like you ask for something that is not your right. We cannot do anything; the decision is in their hands. We just facilitate the process and inform them, send official emails.” AS1 was wondering about having adequate information about her rights at the university. “I need someone to support me... and give me the right resources about our rights.”

**Lack of Human and Financial Resources.** AS2, AE1, AE3, AE4, and BE5 shared similar perspectives about the scarcity of team members, such as a psychologist, social worker, or speech pathologist. Sometimes staff members at the center could not find appropriate or professional tutors for students with LD. To illustrate, AE4 said, “A psychologist and a social worker are needed in the center, as we get some cases who need IQ tests as well as dealing with some disorder like bipolar, also dealing with the family issue.”

In addition, the center was very small compared to the number of students. AE1, AE3, and AE4 emphasized the location of the center, the small offices, and inadequate equipment would have an impact on providing services. For example, AS2 stated, “I feel it [support services center] is supposed to have a significant role... big space, some privacy.... It is good if there are

some private offices. Sometimes when I take the exam at the center, I cannot focus because students come and go.”

AE1, AE2, and AE3, also emphasized the shortage of diagnostic services at the support center and how that affects the students negatively. AE1 pointed out, “We should provide the diagnosis..... We do not need to send the students outside.” AE3 stressed the importance of providing diagnoses and evaluation services at the center in the first year to minimize the consequences on the students.

**Staff Background About LD at the Higher Education Level.** Adequate knowledge about learning disabilities is mandatory to support students with LD. Three staff members agreed about the lack of knowledge and insufficient information about students with LD in higher education. For example, BE5 said her background was Islamic studies, and even with her seven years of experience with other disabilities, this was the first time for her to work with students with LD. They need specialists in LD at the center to work with them. AE1 and AE2 pointed out that the staff at the center faced difficulties differentiating students with LD from students who have low performance because of other factors.

AE2 described the staff’s background regarding learning disabilities in higher education as “a big dilemma” in supporting students with LD at the postsecondary level. When staff do not have enough information about adult students with LD at the post-secondary level, it makes a big difference in supporting adult students with LD.

**Internships and Job Training.** Seventy percent of participants had concerns about students’ internships and employment. AS1, AS2, AS3, and AS4 shared their worries about higher education, internship, future jobs, and their chances to be independent people. When asked about challenges, AS1 said she might not find a job easily because of her major (history),

because she has been told her opportunities to find a job are very limited. She stated, “Because of my specialization, they told me ‘you do not have any future for your career... you will end as a teacher or work in a museum!!’ I don’t know what is wrong about being a history teacher.” AS4 also wondered if she could continue her studies and pursue a Master’s degree or if there were places that would accept her as an intern or employee if they knew she had LD.

AE2, AE3, and BE5 emphasized the need for providing vocational training and improving students’ job skills, while supporting their interests to prepare them for the labor market. BE5 said having a college degree is required to have a job, but it is not enough for the students. They need training in several skills to expand their work opportunities. AE3 revealed that sometimes faculty members make the internship very difficult for the student with LD. For example, AE3 was shocked when a faculty member said about a student with LD and a speech disorder, “She is not qualified to do her internship” even with a GPA of 4, because of her speech disorder. So the department did not approve her internship and, as a result, the student dropped out of school and did not complete her degree.

### **Social and Emotional Challenges**

This theme refers to the difficulties and problems related to students’ social and emotional lives. It includes social interaction, stigmatizing, and emotional issues. Eighty percent of the participants (four students and four staff members) AE1, AE2, AE4, BE5, AS1, AS2, AS3, AS4 said students with LD were facing a variety of social and emotional obstacles.

#### ***Social Interaction***

Fifty percent of the participants (three students and two staff members) AS2, AS3, AS4, AE1, AE2, and AE4 discussed issues that students with LD encountered in their relationships



with friends and relatives. AE4 and AS3 explained that students with LD had limited friendships and faced problems when they tried to develop relationships with others. AE4 stated: Some students with LD are not sociable and have no relationships with their relatives or friends... One student said, "I do not have friends. I try, but they do not want to make friends." They complained about being neglected by other students, and they find it so hard to build relationships with other colleagues.

AE1 pointed out that developing relationships with classmates was not an easy step for students with LD. She stated, "Students' relationships seem not normal; one student came to us and said, 'No group in the class wanted me to join them,' and that affected her."

From a different perspective, AE2 made a connection between the emotional and social sides. She explained if the student had an adequate understanding about her learning disability, she was emotionally stable, and her family supported, she would not have problems affecting her personality. She would be socially active and take part in social events.

When I asked AS4 about her friends and her social life, she responded, "I do not have a lot of friends, I stay alone." Family relationship was an issue that AS2 mentioned. She noted that her family does not have strong connections or great communication, and they do not share a lot of things. She stated, "Everyone in our house lives his/her own life in his/her room; we do not sit at one table or have a meal together."

### ***Stigmatizing***

Seventy percent of the participants (three students and four staff members) AS2, AS3, AS4, AE1, AE2, AE3, and BE5 emphasized that students with LD do not reveal their LD to others. Students with LD think their LD is a personal and private issue. AS2 mentioned that even her parents did not know that she had recently been identified as having LD. She only told her

two sisters who helped her with her classes. AS2, AS3, and AS4 did not discuss their LD with their friends or relatives because of the fear of the stigma related to having a disability. For example, AS3 said, “No one knows about my LD. I do not like to show people that I have LD because I do not want people to look at me and feel sorry for me or pathetically look at me.” She faced a negative reaction from her relatives because of her LD, she elaborated, “They [her aunties] told me ‘You cannot do it, and you will not succeed.’ They say, ‘She cannot read well.’ My aunties told my mom, ‘She will not pass. She should drop the classes, and she cannot read.’”

AS2 shared, “I do not want anyone to say that I am stupid; they told me I am stupid... I do not like it when people judge me.” AS3 felt uncomfortable about the perceptions of her peers when she asked them a question after the class. She elaborated:

When I ask my classmates sometime, they said, “Do not ask.” I do not want to embarrass myself more. When I asked them to clarify something, they told me, “The professor already explained it! You should understand it!” So, I stopped asking and showed them I understood even if I did not.

Students feel that having LD is a stigma, and they care about their classmates’ perceptions. AE1 and AE2 had the same point of view regarding what students with LD feel when they are revealing their disability. AE2 stressed, “Some students need assistance from the class, but they refuse because of the stigma or are scared of their peers’ perspectives.”

Besides the stigma, AE3 and BE5 discussed two reasons that might affect students when they disclose their LD: not having a future job or not getting married. AE3 and BE5 explained some students with LD and their families refuse to receive support services from the center because that might appear in their certificate when they graduate. Therefore, students would not get job opportunities easily or find a spouse who could understand their LD. AE3 stated:

Some students do not want anyone to know about their LD, even their friends, and they visit the center in secret. It is very sensitive for them.... Some of them when I ask them to get the diagnoses they denied and did not come back. They are scared when they graduate it will be shown on their certificates, and it will be written that they received special education services. BE5 shared that some families were presented obstacles for their daughters, and they rejected their daughter's needs. She observed, "The mother refused services because she said, 'If she receives any services that will show on her ID when she wants to get a job or gets married, they will know she has a disability.'"

### ***Emotional Issues***

Eighty percent of the participants (four students and four staff members) AS1, AS2, AS3, AS4, AE1, AE2, AE4, and BE5 highlighted that students with LD were facing an emotional issue. AS2 explained she suffered from psychological problems, such as feeling depressed and having low self-esteem besides her anxiety. She felt lost inside, most of the time. She feels under pressure all the time because of the amount of work. AS2 shared her worries about the internship and how it will be difficult for her to deal with children with autism because she needs support and help before starting her internship.

Feeling lonely was another issue students AS3 and AS4 mentioned. For instance, AS4 said, "I do not have a lot of friends. I stayed alone. Sometimes I said to myself why am I different?" AE2 emphasized that some students with LD, even with the support and encouragement they received, still feel they are "useless." AE1 added that students came to the staff with negative feelings, such as being frustrated, annoyed, or anxious about their classes or their exams. AE1 said, "Many students have anxiety from exams. They are nervous; they came

and asked, ‘Would we pass?’” AS1 revealed some people made her frustrated not because of her LD, but because of her specialization. She stated:

Some people frustrate me not because I have LD, but because of my specialty [history], they told me, “You do not have any future for your career... you will end as a teacher or work in a museum.” They always remind us of our specialization. She told me, “You would be a teacher!!!” I don’t know what is wrong about being a history teacher.

Teachers raise generations.

Feeling shy and embarrassed was mentioned by AS3, AE4, and BE5. BE5 explained, when students with LD came to the center, they did not talk too much or express their needs and feelings. They took a long time to be open and to speak without fear. AS3 explained that she had terrible experiences in high school because she did not read well or participate in class. She said, “In high school, they laughed at me. I was bullied because I did not participate in class... [My close friend] defended me when they [the classmates] laughed on me. She was telling them, ‘Do not laugh on her.’” AS3 felt ashamed about her LD and because she cannot write or read like other students. She also does not like to talk about her LD to anyone. She said, “I do not want to talk about my LD. I am ashamed.”

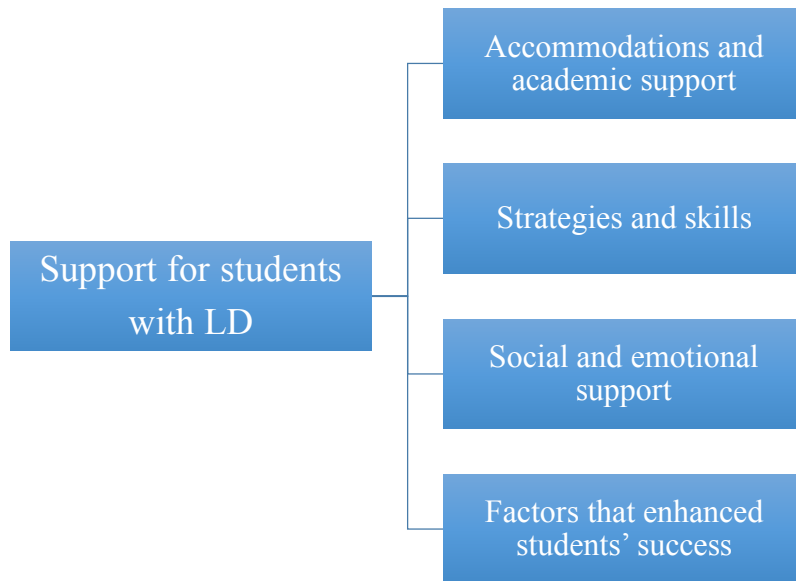
## **RQ2: What Strategies and Skills Did the Support Services Staff and Students with LD Find Effective in Overcoming Challenges During Post-Secondary Education?**

Research question two explored what students with LD used or applied to overcome the challenges encountered. The theme that emerged from the data was support for students with LD.

### **Support for Students with LD**

Support refers to the assistance or sources students with LD sought or received to overcome several challenges and assist them in achieving their academic goals. Support can take different forms, such as academic support or social and emotional support. All participants

discussed several types of support they received. This theme presented four sub-themes: (a) accommodations and academic support, (b) strategies and skills, (c) social and emotional support, and (d) factors enhanced students' success (see Figure 3).



*Figure 3.* Major theme and sub-themes related to research question two

#### ***Accommodations and Academic Support***

Under this sub-theme, the accommodations provided for the students and their importance is discussed. All participants agreed the importance of the accommodations and services provided through the center had several advantages.

The center was the first step for the students without a diagnosis or required documentation. The center recommended students to get an evaluation from outside LD organizations in order to be eligible for services. With a documented diagnosis, the center provided a statement letter including needed accommodations for the students. The statement letter was considered documentation to receive modifications, accommodations, and services at the university. AE4 stressed “The statement letter from the center is the most important

document. It contains the student requirements; it can be changed or modified based on a student's needs." In addition to the letter, the center contacts the faculty members teaching each student with LD as well as the head of each departments. AE2 stated:

We also contact the faculty members directly by email and send the student's statement letter to them. So, they are aware of that. There is a small percentage of the faculty who ask about LD or discuss the accommodations options or how to apply them.

AE2 talked about the process of deciding to provide academic support for students with LD and the benefits of this process for the students. She stated:

At the beginning of the semester, we meet student to arrange her schedule, I see it is a good practice for students, and it has advantages for them because we discuss the classes' requirements, student's needs and give her from two to three weeks to figure out which class that demands support. So, we start from the other side, we have a list of students at the special education department who assist students with LD under the support services center supervision.

AE3 highlighted the importance of the statement letter and mentioned that, if the student does not have this letter, the faculty would not know about her LD or provide accommodation for her.

Students received different types of accommodations and support. AE4 mentioned, "The services provided in the center have helped students with LD in many ways, such as exams, lectures, and they felt that the support given had helped them in enhancing their grades." To be more specific, the most common accommodations provided to students received in this study were extended time for exams and assignments and adapted exam questions format. Four students needed a private room for exams, adapted curriculum and assessment methods, and peer

tutoring. Three students requested reader with big font for exam questions. Two students needed a separate table in class, and the faculty check for understanding of the content presented. One student requested the following accommodations: recording the lectures, a note taker, reducing assignments and activities, alternative assessments or class requirements, extra support in English, involvement in social activities, and providing evaluation criteria for the student prior to assignments or class activities (see Table 17).

The support services centers offer some additional support, such as financial support, workshops, and courses about learning strategies, or personal development or various topics. AE4 said, “We provide all types of support: academic, emotional, psychological, and financial support. Students get a stipend from the government.” Students with LD receive a stipend from the university, as do all students in a public university, and an additional stipend from the government for students with physical disabilities, visual and hearing impairments, or students with chronic diseases. Some shops at or outside the university give special offers for all students with disabilities. AS1 mentioned, “They [support services center] gave us a special card that has a discount for some stores at the university.”

**Table 17***Accommodations for Students with LD*

Student	Type of learning disability	Type of Accommodation
AS1	Math, reading, and writing	Extra time for exam and assignments Private room for exams Personal reader Peer tutoring Divide the exams to small quizzes Adapt curriculum and evaluation method Separate table for testing Note-takers Recording the lectures Workshop and training courses
AS2	Reading and writing	Extra time for exam and assignments Private room for exams Personal reader Peer tutoring Divide the exams to small quizzes Adapt curriculum and evaluation method Faculty check for comprehension
AS3	Math, reading, and writing	Extra time for exam and assignments Reduce assignments and class activities Avoid questions or feedback during the presentation Provide the evaluation criteria to the student prior to assignment or activities Adapt the format of exam questions
AS4	Math, reading, writing, and science subjects such as biology, chemistry, and physics	Extra time for assignments and exams Private room for exams Personal reader Adapt curriculum and evaluation method Large font for questions Separate table for testing Adapt class's requirements Extra support in English
BS5	Math, reading and writing	Extra time for assignments and exams Private room for exams Adapt curriculum and evaluation method Faculty check for comprehension Ensure in-class participation in activities



**Peer Tutoring.** Of all the accommodations and support students with LD received from the center, AE1 AE2, AE3, and AE4 emphasized that peer tutoring was the most beneficial, especially if the tutors were special education majors. AE2 said:

The most effective is peer tutoring, especially if the tutor is from a special department and specializing in LD... In peer tutoring students' age is similar, and they are on the same level, so students with LD listen to them more than they listen to their professors... It is the best practice that affects students with LD.

AE4 spoke about the advantages of receiving peer tutoring at the center and how it had a positive impact on students' performance. She explained, "Students became more interested in studying and cared about their grades and their success. The GPA of some students increased after receiving the support sessions [peer tutoring]." AE3 echoed AE4's comment about peer tutoring, and she added that peer tutoring was beneficial. AE3 elaborated:

Support sessions [peer tutoring] is beneficial because the student knew about the classes and had the experience. For instance, when students with LD read, they cannot specify what is important and what is not, so their peer will guide them and make a list for them.

AE3 found peer tutoring more helpful when a student has the same peer for all semesters. When the student already knows the tutor, they can engage more quickly in the tutoring session.

**Workshops and Courses.** Fifty percent of the participants (three staff members and two students) AE1, AE2, AE3, AS1, and AS4 shared positive attitudes about the outcomes of the workshops and courses offered through the center or through the university. Students learned essential skills such as time management, self-development, stress management, and the use of Blackboard. They also learned academic strategies, such as concept maps and sketch notes. AE1 mentioned that "training courses... work well" for students with LD. AS4 emphasized that she

tried to attend the courses even with her limited time during the day. AS1 appreciated these workshops and courses because they had a significant impact on her skills and her personality.

She stated:

The workshops and training courses in my department helped me, how to write a research paper, leadership skills, and leadership programs such as the Hackathon competition.

Besides the extra courses, I attended workshops on my off days... I really got benefits from these courses and workshops... I learned speech skills at the university.

**Strategies and Skills.** All of the participants discussed the strategies students with LD used to deal with academic obstacles. Strategies are specific techniques or methods that students used to study, while “skills” refers to the abilities that students improved or gained through practices. These strategies and skills are presented below.

***Memorizing.*** Four students with LD in this study shared that memorizing information was a strategy they used to study for their exams and classes. Students had used memorizing in high school, and some students realized memorizing was not effective at the post-secondary level. They might link memorizing with another strategy or with extra support from peer tutoring, or self-teaching, or help from family members or friends. For example, when I asked AS1 about her way of studying, she said:

Memorizing is the way that I use the most... I understand by teaching myself... My mom and my friend help me study. I memorize, then they ask me, and if I have some mistakes, they correct me, and I repeat that. Now I try to read then memorize and understand. For example, if I have a question about listing some reasons, I did not just memorize them but tried to write something similar to them, so if I did not remember, I could write the same meaning but with my own words.

AS2 pointed out memorizing information at the post-secondary level was difficult because of the number of courses, different references, and large amount of content. So, besides memorizing, she tried to read and study with her friend to discuss any difficult information or questions.

AS3 and AS4 agreed that the value of memorizing in some classes that required definitions or particular information, such as the holy Quran or theories. AS3 stated: Memorizing is the most beneficial way for me... I like to memorize the Quran, and when my teacher asks me to memorize it, I tell her to divide it into small parts to make it easy for me. For instance, I memorize a sentence of five words, and that does not let me add some words or letters because it is Quran and prohibited to add or delete anything.

AS3 has LD in reading and writing and as a result she adds or deletes letters or words. However, memorizing the Quran helped her to minimize adding letters or words to the Quran. AS4 stressed that she used memorizing “because it is theory, so there is no way to save it or remember it without memorizing.”

***Concept Maps.*** Ninety percent of the participants (five students and four staff) found that using concept maps was very beneficial for studying and reviewing their chapters. AE2 mentioned a student who learned concept maps and sketch notes for reading comprehension, and she started to generalize those strategies to most of her classes. AE2 described the generalization of these strategies as a “strong point.” Some students, like AS1, knew how to use concept maps from high school or middle school. Other students just learned them at the university. For instance, AS2 was struggling when she tried to use concept maps in her class, but she figured out several ways to improve her use of concept maps. AS2 elaborated:

One of my professor gave us concept maps as an assignment for the same lecture to help us. It was a disaster for me. For the first time, I did not do. The second time, I took my friend's and I changed it. The third time, I did it as a list. I felt there was an improvement. Concept maps helped me a lot, and I think it is for intelligent people..... So, I read them, summarize them, and do the concept map. She [her professor] always gave us keys to study an incomplete concept map, then we had to finish it.

AS3, AS4, and BS5 spoke about using concept maps as a strategy to link some thoughts or to memorize theories or to summarize information in chapters. AE2, AE3 and AE4 said peer tutoring played a significant role in teaching students with LD concept maps and how to apply them in their classes.

**Technology.** AS1, AS3, AS4, and BS5 were all using technology in different ways. They stressed technology was a useful resource that supported their learning, and the tool they used most was YouTube. Students used YouTube to seek examples or steps for their assignments. AS1 described how she used technology during peer tutoring sessions. She and the tutor used computer games to improve her reading skills. AS3 was curious about technology and how she could use it as a tool for her writing. She explained:

In groups or even individual work, I do voice record, even if I had some mistakes. Then send it or print it out. There is a feature on the iPhone for older people and people with special needs. I saw it on my grandmother's phone, so I looked for it and used it. I am looking for these types of things always and on YouTube.

AS4 found that using YouTube helped her to develop the background for her Master's and Ph.D. research. She looked for different professional bloggers who presented research methodologies and research steps that would support her in continuing her education. She also used YouTube to

find examples similar to her assignments. Also, AS4 talked about her French language class and how she used a language application to improve her grades. She explained, “An application I used to learn languages... I record my voice through that application, then it will be a text and the application translates it. I had a full mark. That was very easy for me to answer verbally.”

***Time Management.*** Only two students AS1 and AS4 mentioned they managed their time to study or complete their assignments. For example, on her off day, AS4 goes to the library from early morning until late afternoon to work on her project or assignments. AS1 arranges weekly and daily schedules for her classes which helps her to manage her time, submit her assignments on time, and reduce stress. She stated:

I always arrange schedules for myself for studying and for the exams. I do that before three weeks [of her exams]. For example, I had two exams in one day. I made an early schedule and divided what I should study into small amounts. I did this method since level one until now level six. That way does not put me under pressure.

AE2 emphasized the advantages of using the support services center, and one of those advantages was learning time management skills. She observed that not only do students with LD face problems with time management, but most college students do as well. She explained that students learn how to organize their classes and schedules, and they discover these ways during their meetings with the staff at the center.

***Additional/Alternative Methods.*** All the five students discussed additional strategies to assist them while studying or completing assignments. For example, AS2 and BS5 avoided sitting at the front in the classroom to prevent any distractions from students’ questions or outside noise. AS4 preferred studying at the library. She also mentioned avoiding classes that required too much writing or assignments that demanded essays and because of the lack of

modification or accommodations in those classes. She stated, “I tried to avoid similar classes and do not take literature classes because it will be essays, and they [her department] will not change anything for me.”

AS2 pointed out that modeling is crucial for her and that she does better if she has an example or model. She said, “Individual work is okay if I have a model to follow... Even if it is a different subject, at least something makes me comfortable.” She also highlighted the importance of group work because it allows her to share thoughts, ideas, and experiences, and reviewing or talking about the assignments helps them to learn from their mistakes. She also utilizes positive and negative reinforcement. She learned how to use these strategies in her special education classes. For example, she used running as a form of negative reinforcement. She said, “I punish myself if I did not do well. I have to run.”

**Social and Emotional Support.** This theme was about the support and the encouragement students received from their family, friends, faculty members, and staff at the center. All the participants discussed the importance of having a supportive family, friends, and instructors, and how that encouraged the students during their journey. AS1 appreciated the support from her teachers, especially when her teacher moved from her middle to high school to support her and this teacher was attending her classes to determine the difficult lessons and identify her strengths and weaknesses.

AS1, AS2, AS3, AS4, and BS5 shared similar perspectives about supportive families and how their families support positively affected them. For instance, AS4 said, “My family always supports me and encourages me by saying, ‘You can do it.’... My family supports me emotionally, and even for my major, they allowed me to choose what I want.” AS1 had strong and unlimited encouragement from her family. She stated, “My parents are the biggest support

for me.” AE2 observed that AS1 was very motivated and wanted to be a doctor. She believed this was due to AS1’s family’s encouragement and support.

AE1, AE3, AE4, and BE5 pointed out that students with LD rely on and trust staff members when it comes to their emotional or personal problems. AE1 said, “Sometimes our staff help students with their problems. One of our staff went to the hospital to reschedule the student’s appointment. They assist the students personally.” AE3, AE4, and BE5 said students had benefitted from workshops to deal with stress, improve communication skills, and adjust to college life. AE4 stated:

We encourage them to start making some conversation about the class or assignments.

We have a what’s Up group, with all of my students in one group. They shared their experiences and talked to each other and participated in support group sessions...They [the students with LD] gained confidence and became independent because of the support sessions that encouraged them to interact with each other.

Working with other specialists, such as social workers or psychologists, was required to best support some students. For example, BE5 found it necessary to collaborate with a psychologist to best meet the needs of one student’s situation. The student and her mother realized the positive effects and the advantages of the psychological sessions on the emotional life of the student.

After enrolling at the university and registering at the support services center, AS1 and BS5 shared they were more socially active. AS1 explained, “Now I have more communication skills... they [staff at the center] encouraged me..., nominated me to participate in special events such as LD day.” BS5 said, “I do not have friends in elementary or in secondary school, but now I have many friends I hang out with them.”

All the students in this study mentioned they have a close friend who always supports, teaches, and encourages them—at high school or at the university. BS5 and AS3 discussed the growth in their relationships. They started to have more friends and to engage more in social activities in the post-secondary level compared to high school. BS5 noted, “My friend supports me in a different class. At the university, we sit together in our breaks, and she helped me a lot.” AS3 stated, “I tried to engage with people and talked, but if I felt there was something wrong or I would make some mistakes, I stopped talking.” Now, she says, “I became brave and talk to strangers.”

All participants shared similar perspectives about faculty members and their cooperation in providing the recommended accommodations and modifications for the students with LD. Participants mentioned some faculty members were very cooperative and supportive, even without knowing about the LD. For example, when I asked AS1 about her teaching faculty, she said,

Some professors are very cooperative... support me... minimize the amount of the curriculum by decreasing the number of pages [of the unite] to 10 pages. [They] change the type of questions to multiple choice and true or false; [they] make the questions simple and easier.

AE4 stated:

The teaching staff is so cooperative when it comes to students’ needs, so they adjust and simplify the curriculum to support their needs... They divide the curriculum and the exam for them. They meet students with LD at their office during their office hours to clarify some information or explain what they did not understand.



**Factors that Enhanced Students' Success.** This sub-theme included factors that contributed to students' success, such as self-awareness, desire to learn, and self-improvement.

***Self-Awareness.*** Four students spoke about being different, and they recognized that affected their GPA and their grades, and had an impact on their social and emotional lives. AS2 noticed she was different since she was young, "I know it; I had something." AS3 made a similar statement: "Look, I know there was something." AS4 wondered about being different. She stated, "I said to myself, 'Why I am different?'" AS1 realized her disability would not go away and she will have to deal with it when she graduates or when she has a job. She is aware it is a life-long disability.

***Desire to Learn.*** When asked about their motivation to study at the university, all of the student participants had the same statement regarding the desire to learn, or to overcome obstacles, or to prove they can succeed—to be independent and take responsibility for their lives. AS1, AS4, and BS5 expressed intentions to complete their higher education. AS1 was very optimistic and she had long-term goals for herself. She mentioned she wants to be a professor at the university, and she is working hard on that goal. She stressed, "I planned that a long time ago, I have a long-term goal, I want to continue my higher education and get my Master's and Ph.D. I want to be a dean, then president of the university." AS3 discussed commitment and persistence and how those values led her to work hard to achieve her goals. She always talks to herself positively. She elaborated:

I fight. I have a commitment. If I want to do something, I have to be independent... I feel I can do it; I am equal to other students; there is no difference between us. Everything they [college students] can do, I can do it too.

***Self-Improvement.*** All the students stated they were motivated, and taught themselves because of their desire to learn, achieve goals, and be independent. For example, AS4 was inspired by her elementary teacher who encouraged her to teach herself in the summers by watching English movies to improve her language and vocabulary and watching academic videos to develop her research skills. AS3 mentioned, “I am working on myself. I love self-development.” She liked to attend workshops and courses at the university to improve her social skills and develop her personality. AS1 emphasized that her passion for learning about history makes her attend several courses to improve her writing and leadership skills. She stated:

I developed some skills such as discussion skills and accepting things that I cannot change such as my study plan. I trained myself to deal with stress and adjust myself even if I have exams or several assignments or projects. I try to see them as positive things, not negative. The workshop and training courses in my department helped me [with skills] such as how to write a research paper and leadership skills....Besides the extra courses, I attend workshops on my off days.

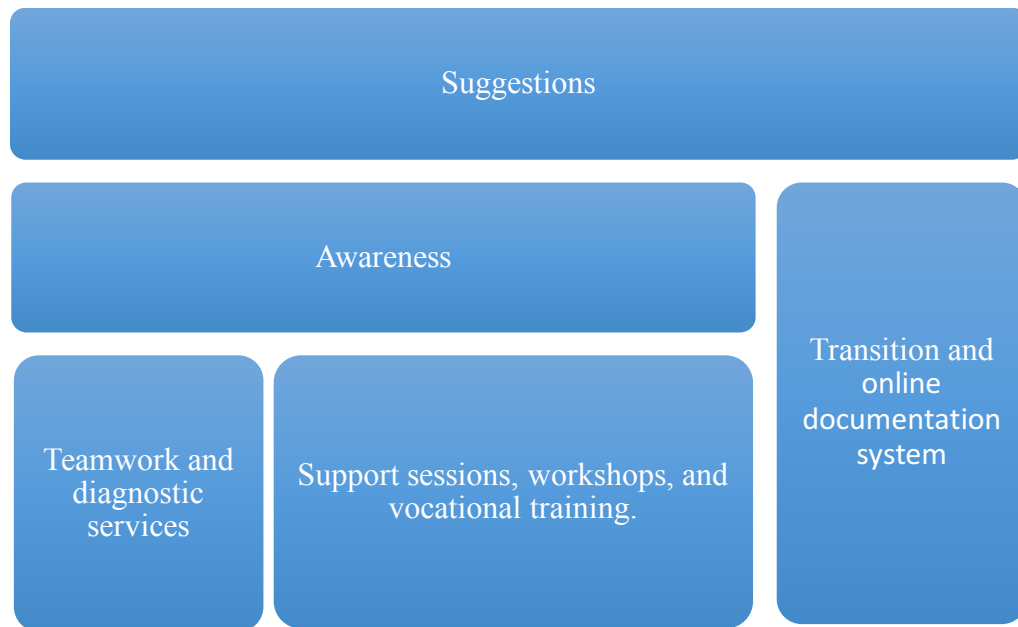
### **RQ3: What Do Students with LD and Support Staff Recommend and Suggest to Improve Services?**

The third question in this study led to several recommendations that students with LD and the staff at the support center thought would enhance the services at the center and would assist students with LD.

#### **Suggestions**

From this theme, suggestions refer to the recommendations or ideas that participants shared to improve the services at the support services center. Under this theme, four sub-themes emerged from the data: (a) awareness, (b) transition and online documentation system, (c) teamwork and diagnosis services, and (d) support sessions, workshops, and vocational training.

All participants shared recommendations that would enhance the effectiveness of the support services center, its services, and contribute to students' success at the university and in the future (see Figure 4).



*Figure 4.* Major theme and sub-themes related to research question three

**Awareness.** Sixty percent of the participants three students and three staff members (AS1, AS2, AS4, AE1, AE3 and BE5) highlighted raising awareness about learning disabilities and the center is essential and would make a difference for students with LD. AS1 said “First and last is awareness because it is significant for me, and if a person understands you, he/she can support you and help you to succeed.” AE1 stressed the importance of educating staff and students at the university about learning disabilities because “There is a lack of awareness about special education and especially about LD. They [faculty members] do not know about LD. They think the student is careless.” AE3 recommended providing awareness sessions to educate students with LD about their rights because it is essential for students to be aware and knowledgeable about their disabilities and their rights.

**Transition and Online Documentation System.** AE2 discussed significant factors impacting the development of IEP's and transition plans the continued coordination of developing a transition program at the university level. She stated:

There should be a link and continued service between higher education and general education... activate IEPs and include a transition plan for students with LD. One of the staff members should be a part of the transition plan since the student in high school, so we do not have to start from the beginning.

She explained how effective IEPs, transition plans, and transition programs could prevent negative impacts on students' success and accelerate receiving support services at the university. She also shared her perspective on international experiences for students with disabilities:

If you see international practices, still students with disabilities who graduated from high school face issues, even if they had transition services for a long time... that established by federal law and IDEA. But at least there are transition programs at universities.

AE2 mentioned there was only one university she knew in Riyadh that provided a transition program for one year for students with hearing impairment.

AE1, AE4, and AE2A shared similar perspectives about the need to have an online documentation system between general education and higher education, as well as within the university to provide information about students with disabilities. This system would support a smooth transition from secondary to post-secondary education. AE2 said, "There should be a system that has all the student's information, and every week the staff should write an update for the students." AE4 stated:

There should be a connection between us [support services center] and the registration office. When they accept students with disabilities, we should have a meeting with them, give them a tour at the center and encourage them to get advantages from it.

AE1 found it is necessary to screen all freshman students to determine and identify students who may be at risk for academic failure. She observed the number of students with LD known to the center is far less than the number of students with LD at the university. It shows only the number of students who received support services; there might be students who do not know they have a learning disability. AE1 offered another suggestion about activating a consultation center and a hotline to support students or employees with LD at the university. She explained that students and employees with LD could ask questions or share their problems and get solutions or advice through such services.

**Teamwork and Diagnostic Services.** There was unanimous agreement among all staff participants regarding the importance of having additional staff available for students, such as a psychologist, social worker, physical and occupational therapist, and speech-language pathologist. AE4 discussed the need for a psychologist and a social worker because “we get some cases who need IQ tests as well as dealing with some disorder such as bipolar, also dealing with... family issues.”

Three employees stressed the diagnostic service is the most important because there is a lack of professional diagnostic services for adult students with LD. They observed that most of the evaluation and assessment tools through special education programs or LD organizations are not appropriate for adult age students. Most of those organizations use tests for the elementary stage and students younger than 16 years of age. AE2 explained, “We do not have diagnosis and assessment tools. We send the students to the LD association to do the assessment. They do not

have the appropriate assessment tools that match the student's age." AE1 added, "We should have a diagnosis center to provide appropriate evaluation, not an assessment for the elementary stage... We do not need to send the students outside."

**Support Sessions, Workshops, and Vocational Training.** Seventy percent of the participants (three students and four staff members) AS3, AS4, BS5, AE1, AE2, AE4, and BE5 discussed the need to provide additional support sessions by peers as well as workshops about various topics, such as study skills, time management, and job/ life skills. Staff and students recognized the positive impact of these sessions and workshops on the students' academic performance and on their social and personal lives. AS4 described the students after receiving different types of support from the center, "Students became more interested in studying and cared more about their grades and their success. The GPA of some students increased after receiving the support sessions." AS3 was very motivated when she knew about the center and its services, which encouraged her to visit the center regularly and seek more sessions. AS1 discussed the advantages of these workshops and courses. She stated:

I really got benefits from these courses and workshops. We have a vocational transcript from the university that has specific hours you can reach, then finish all these hours with extra courses, workshops, volunteering, so when you apply for a job, they look at the transcript... These courses and workshops helped some students to get a job.

AE2 and BE5 shared similar observations about the importance of vocational preparation and training and why it is necessary for students' employment. AE2 pointed out the center should work on vocational training to achieve the university's vision and prepare students for the labor market. She was optimistic about this step because there are good examples in the Saudi community, and some organizations and companies support students with disabilities. AE2

stated, “We can find financial support from the community. There is a sense of humanity. Some companies will offer a job for them when they had training.” BE5 spoke about providing computer courses and job training to increase the students’ opportunities to find a job and live independently. She explained that these courses “will assist them in the future... they need to be independent and need income to live.”

Both AE2 and BE5 stressed the need to focus on the interests and strengths of students with LD to empower them and give them chances to explore more work choices related to their interests. AE2 said, “we have to support students’ skills and interests. For example, a student studies history, but she cannot find a job, so she should improve her skills to be eligible for another job.” BE5 shared her point of view about the students’ abilities and outcomes: “If we work well with them [students with LD] to be creative, they are creative. We had an exhibition, I was shocked by the students’ products. They are great in drawing, Photoshop, photography.”

In addition to increasing the number of workshops and support sessions for academics, there were suggestions by some participants to provide support for social groups. For example, AS2, AE3, and BE5 shared the idea of creating social groups to talk about experiences with LD and to share effective study strategies and skills to overcome obstacles. Such groups would be beneficial for social and communication skills. AS2 stated, “It is good to discuss difficulties and know other students from different specializations, and to share our experience of what works and what does not.” BE5 added that having regular meetings and planning for social activities would improve the social skills of students with LD and improve their job opportunities. She elaborated “They need more activities because they will go out and work... so why we do not work with them and improve their skills? We might let the student work with us at the center in the future.”

## **Summary**

This chapter presents the findings of the study. Five major themes and 20 sub-themes emerged from the analysis of 10 interview transcripts. Students with LD and staff members at the support services centers discussed several obstacles and challenges that students encountered when enrolling at a university. These challenges included three major themes: pre-university challenges, academic challenges, and social and emotional challenges. The first theme pre-university challenges, involved problems and issues that confronted students with LD before they received support services. This theme included three sub-themes: (a) lack of diagnosis documentation, (b) lack of previous special education services, and (c) lack of disability disclosure. The second theme was the academic challenges that students with LD encountered during their study at the university. There were five sub-themes that emerged: (a) learning environment, (b) heavy workload and difficult content, (c) time management and study skills, (d) faculty members, and (e) support services center. The third major theme was the social and emotional challenges that students faced, and it included three sub-themes: (a) social interaction, (b) stigmatizing, and (c) emotional issues. In the fourth major theme, participants discussed several supports students with LD received and strategies they used to overcome the challenges that confronted them. It included four sub-themes: (a) accommodations and academic support, (b) social and emotional support, (c) strategies, and (d) factors that enhance the success of students with LD. To improve the services provided through the support services center, participants offered several ideas. Suggestions was the fifth theme, and it included: (a) awareness, (b) transition and online documentation systems, (c) teamwork and diagnostic services, and (d) support sessions, workshops, and vocational training.



## CHAPTER V

### DISCUSSION

The purpose of this qualitative study was to explore the challenges and obstacles confronting students with LD who receive support from support service centers at S.A. universities, incorporating both staff perspectives and the perspectives of the students with LD. In addition, the study examined the strategies and skills that students use to overcome these challenges and reviewed their recommendations for the further development of support services. To gather the data, a semi-structured, in-depth, face-to-face interview was conducted with five female students with LD and five female staff members at two support centers in two public Saudi universities. The interviews were recorded, transcribed, translated to Arabic, and analyzed. This chapter presents a summary of the findings and their implications, and also considers the limitations and/or recommendations for future research.

In Chapter II, the researcher provided a summary of the literature related to the topic of this study. A thorough search was conducted of both English and Arabic databases for peer-reviewed journal articles, Ph.D. dissertations, and Master's theses that addressed the experience of students with learning disabilities at the post-secondary level. However, most of those studies were quantitative studies, focusing either on students with physical disabilities and hearing and visual impairments or on the attitudes of faculty toward university support services. To date, no studies have focused on students with learning disabilities at the post-secondary level in S.A. Thus, the findings of this study contribute to the body of the literature on students with learning disabilities at the post-secondary level in Saudi Arabia.

The study addressed three research questions:

RQ1. What are the challenges students with LD face at the beginning and during postsecondary education?

RQ 2. What strategies and skills did the support services staff and students with LD find effective in overcoming challenges during postsecondary education?

RQ3. What do students with LD and support staff recommend and suggest to improve post-secondary services?

### **Overall Perception**

According to the findings of this study, the researcher found students with LD encountered challenges before and during the delivery of support services. The differences between the responses of the participants (students with learning disabilities and support services center staff) were minimal.

These challenges faced by student participants varied and were based on the time of their diagnosis (before or after enrolling in the university) and if they had received special education services in elementary or secondary school. Students who had an early diagnosis and received special education services had fewer academic, social, and emotional difficulties. They were found to be more confident, have more relationships, and have more active social life in comparison to students who were diagnosed with LD following their enrollment in the university and subsequently received support only at the post-secondary level.

The lack or limited availability of legal documentation regarding students' diagnoses and their previous access to special education services were regarded as barriers by four staff members. This issue resulted in delays in their assessment of students' eligibility to receive post-secondary support services. From the researcher's perspective, this shortcoming may relate to the

poor implementation of the law within general education. For instance, there may be schools without resource rooms that provide special education services, resulting in some students not receiving an appropriate evaluation or access to special education services. Even though the importance of the policies and procedures has been stated for many years, Alharbi and Madhesh (2018), Aljadid (2013), Alnahdi (2014), and Alquraini (2011) have documented they are not well implemented and practiced. Furthermore, these policies have been found to be missing critical details and elements (Alnaim, 2015), such as transition plans and services.

Staff members who have ten or more years of experience focused on the big picture, considering all aspects of the students' experience. Additionally, they focused on the previous processes facilitating students' post-secondary support services, such as transition services and the administrative link between the Ministry of Education and the Ministry of Higher Education. However, staff with fewer than ten years' experience focused more on the experiences of individual students with LD and the services provided at the university's support services centers.

In general, a lack of awareness about learning disabilities among both the students and faculty members at each of the universities was found; three students were not aware of their rights and two students did not know support services existed at their universities. In addition, the researcher noticed that the parents' level of education impacted the timeframe in which students were able to access support services at elementary or secondary school or at university. According to the findings, parents who had a bachelor's or higher education degree were more involved in sourcing support services at their child's universities in comparison to the parents who had a high school diploma or, elementary certificate, or no degree. For example, Parents of AS1 hold a bachelor's degree, and BS5's father holds a Ph.D. degree and her mother holds a

bachelor's degree, both AS1 and BS5 received an early learning disability diagnosis in grade three at elementary school. As a result, AS1 and BS5 had their parents' involvement in sourcing support at the university. On the opposite, AS3's father holds an elementary certificate, and her mother holds a high school diploma and works at the same university, has a lack of information regarding learning disability and the available services for students with learning disabilities at the university.

In brief, the findings of this study explored the challenges confronting students with LD and discovered a number of useful strategies that assist students in overcoming the challenges of their academic journey. All participants made significant recommendations for the improvement of the support services available at the post-secondary level. Five major themes and 19 sub-themes emerged from the analysis of 10 interview transcripts that were organized with reference to the research questions and the literature.

### **RQ1: What are the Challenges Students with LD Face at the Beginning and During Post-Secondary Education?**

Participants were asked about the challenges students with LD face before and during post-secondary education. Three challenges were identified. These challenges are categorized as pre-university challenges, academic challenges, and social and emotional challenges.

#### **Pre-University Challenges**

Several issues were evident before students began receiving support services and were found to impact the students with LD. These issues include a lack of diagnosis documentation, lack of previous special education services, and lack of disability disclosure. These three issues caused a delay in the process of providing the support services and appropriate accommodations for the students with LD.

### ***Lack of Diagnosis Documentation and Lack of Previous Special Education Services***

In this study, five staff members indicated a lack of documentation regarding students' diagnoses and students' previously lack access to services were significant barriers to their work. Both students support centers refused to accept students without appropriate documentation, which delayed support services to students. This issue may be related to both the parents' and the teachers' awareness of learning disabilities, as indicated by three participants (two students and one staff member). Due to their lack of documentation, students received either limited or no support service in elementary and secondary school suggesting that these two issues are related.

One staff member described a series of weaknesses in special education outcomes at the secondary level, listing ineffective IEPs, not well-prepared teachers, and the absence of transition services as factors causing difficulties for students with LD. This finding aligned with Abunyan's (2014) study that considered how the application for individual education programs, traditional teaching methods and the provision of special education services might impact students' success at the post-secondary education level.

Regarding transition services, as one staff member noted, RSEPI provides transition services early on but does not specify a specific starting age of provision in Saudi policy (Alquraini, 2014). In this study, transition services were put in place throughout the three educational levels for only one of the five student participants. This emphasizes the fact that services are not effectively implemented for Saudi students with disabilities (Alharbi & Madhesh, 2018; Aljadid, 2013; Alnahdi, 2014; Alquraini, 2011).

Two students (AS2 and AS3) were aware they had learning issues before enrolling in the university. However, they had not been evaluated for a learning disability prior to their enrollment and were unable to provide documentation of disability to the support center. As

indicated by participants AS1, AS4, and BE5, a lack of documentation and lack of special education services could be attributed to the lack of knowledge regarding learning disabilities by either their parents or general education teachers. A lack of awareness regarding learning disabilities, therefore, hindered these participants' access to an appropriate diagnosis and adequate special education services at both the elementary and secondary level. According to the findings of the study, two students AS1 and BS5 had the adequate evaluation documentation, AS1 had a transition plan, and both students' parents were aware of their learning disabilities and relevant background knowledge of the disability. These two students (AS1 and BS5) had their documentation from an early-stage (elementary school) and received special education services throughout elementary and secondary school. In comparison with the rest of the students, these two students had less academic, social, and emotional challenges; this can be attributed to the parents' level of education, and their parents' awareness of their learning disabilities and needs.

### ***Lack of Disability Disclosure***

Feeling ashamed or embarrassed of others' judgments alongside other potential social stigma prevented students from disclosing their learning issues and problems. Three students included in this study were concerned about self-image and peer perspectives and preferred not to reveal their learning disabilities as a result. However, disclosing LD could help the students to succeed and accelerate the process of receiving the support services needed at the post-secondary level. This finding aligns with DeLee (2013), Hadley and Satterfield (2013), and Lightner, Kipps-Vaughan, Schulte, and Trice (2012) point regarding students' feelings, such as shame or embarrassment that prevents them from seeking academic support services or obtaining academic assistance and accommodations when entering the university.

## **Academic Challenges**

Academic challenges is the second issue facing students with LD at the post-secondary level. According to the participants, these challenges specifically include a learning environment, a heavy workload and difficult content, time management and study skills, faculty members, and support services center.

### ***Learning Environment***

The findings show four students and one staff member (AS2, AS3, AS4, BS5, and AE1) stressed that the new and unique university learning environment was challenging for the students with LD, especially in their first year. The level of education and system of learning are different from high school, and students did not receive any preparatory courses or sufficient background instruction about university-level education. This makes the situation ambiguous for students with LD until they begin their classes at the university and face the difficulties, including the grading system, classes' requirements, and teaching styles that impact their academic performance and eventually their GPA. The result of this study aligns with several studies from the existing literature indicating that students with LD may face challenges when starting university, such as new lifestyles, new responsibilities, a different atmosphere, and various additional requirements (Alwabli & Binomran, 2018; Hong, Haefner, & Slekar, 2011; Denhart, 2008; Madaus, Banerjee & Merchant, 2011; Simpson & Spencer, 2009). Furthermore, Hadley (2007) pointed out that students with LD would be required to assume a new level of responsibility and independence when transferring to higher education.

### ***Heavy Workload and Difficult Content***

This study showed 70% of the participants (four students and three staff members) AS1, AS2, AS3, AS4, AE1, AE2 and BE5 remarked that the considerable heavy workload and

difficult content presented obstacles for the students. Universities' courses and class assignments involved a significantly increased workload, particularly when compared with the limited amount of homework students typically complete in high school. Thus, students with LD face challenging assignments, large-scale projects with a significant number of required supporting references, which causes them to struggle and impacts their GPA. This finding is supported by McGregor et al.'s (2016) study, showing that students with LD confront additional struggles relating to academic tasks, assignments, and course requirements. In this study, the three staff members stressed that the extensive curriculums, the number of assignments, and the heavy workload posed significant challenges to students with LD.

### ***Time Management and Study Skills***

The lack of time management skills presents obstacles for students with LD. AE2 pointed out that poor time management skills prevented the students with LD from arranging their daily or weekly schedules in an effective way, which impacted their productivity. Four students (AS1, AS2, AS3, and AS4) pointed out they struggled to submit their assignments and research papers or finish their exams on time, and they requested extra time. One student, AS3, stressed she struggled to arrange and manage her schedule. This result is supported by Hadley (2017), Hadley and Satterfield (2013), Shea, Hecker, and Lalor (2019) emphasizing that students may struggle to manage their schedules and submit new types of assignments.

Two students, AS2 and AS3, identified a lack of study skills or learning strategies as a hindrance to the development of an appropriate and effective academic skill set, such as summarizing information, recalling what they have learned, and self-reliance while studying. In addition, their insufficient background knowledge regarding learning strategies caused difficulties when engaging with strategies such as concept maps. In response to this, the two



students listed above tried to adjust and adapt the strategy (concept map) that they had learned and were able to then use it when writing assignments and preparing for exams.

### ***Faculty Members***

Despite the good relationship between faculty members and students with learning disabilities, there are some difficulties students faced with some faculty members in relation to the awareness regarding learning disabilities and meeting the students' needs. For example, AE4 indicated the faculty members were cooperative when it comes to the needs of students with LD, faculty adjusted and simplified the curriculum, and met students during their working hours to clear some information or explain what they did not understand. A faculty member in the special education department advised student AS2 to visit the support center, which initiated an evaluation by a nonprofit learning disability association. AS1 stated professors reduced the amount of the curriculum, adapted the questions and evaluation format for her.

On the other hand, there are some difficulties students confronted with some faculty members regarding their awareness of learning disabilities and meeting the students' needs. A number of participants (four students and two staff members) reported some faculty members were inflexible and uncooperative when working with students with LD. They were unwilling to meet these students' needs or provide class materials, such as the PowerPoint presentation at an earlier stage. Some professors felt it was unfair to make exceptions for students with LD. In addition, faculty members often lacked an awareness of LD, which can cause delays in providing the appropriate accommodations for their students. One staff member AE1 who is the director of the support services center shared her perspective on the reasons why students with LD faced difficulties when dealing with faculty members. She remarked this is an issue because the

students do not know their rights, there are no written university policies regarding LD and the faculty lacked information regarding LD.

The findings regarding the above issues with faculty members align with those found in the literature. The lack of awareness regarding LD and the type of communication and interaction that occurs between students with LD and faculty members might lead to misunderstanding when the students ask for accommodations. For instance, O'Shea and Meyer (2016) and Roer-Strier (2002) point out there are several obstacles for students that are associated with a lack of awareness and information about LD among faculty members and university employees. Cawthon and Cole (2010) also stress the level of interaction, relationships, and communications between students with LD and faculty members appear to be more formal.

Additionally, four students and three staff members (AS1, AS2, AS3, AS4, AE3, AE4, and BE5) pointed to several issues confronting students with during their classes, such as new teaching styles, class presentations, references and secondary reading, and class requirements. Three staff members described students with LD as unfamiliar with the teaching style at the university level, suggesting that it is different and new to them.

For example, two staff members and four students pointed out that students with LD faced difficulties in their classes, such as the instructors speaking quickly during the lecture, instructors' illegible handwriting, the pace of the lecture, the number of presentation slides and issues with blackboard-based and online assignments. These findings are aligned with Hadley and Satterfield's (2013) results indicating students with LD face difficulties adjusting to their professors' teaching styles, while Hadley (2007) revealed students with LD find their professors move quickly when reviewing class materials, making it difficult for students to keep pace.

Blackboard and E-learning or online classes present an additional challenge for students with LD given that students have no prior experience using these types of features and can struggle to complete their assignments. This result differed from Heiman and Shemesh's (2012) finding showing students with LD were satisfied engaging with web courses and these tools were essential to their communication with their professors.

### ***Support Services Center***

Four students and five staff members (AS1, AS2, AS3, AS4, AE1, AE2, AE3, AE4, and BE5) discussed several issues relating to the support services centers. These issues included policies, lack of human and financial resources, staff knowledge of students with LD in post-secondary level, and internships and job training.

**Policies.** Two staff members remarked that lack of established and written policies and procedures for students with LD within the university system is a major issue that negatively affects the process of providing support and accommodations. As noted in the literature, the policies and procedures supporting the rights of individuals with disabilities have been in effect for many years, but they are not always implemented in practice (Alharbi & Madhesh, 2018; Aljadid, 2013; Alnahdi, 2014; Alquraini, 2011).

**Lack of Human and Financial Resources.** Four staff members highlighted personnel shortages in their team: psychologist, social worker, speech pathologist, and physical and occupational therapists. Furthermore, the number of appropriate or professional tutors for students with LD is limited. Regarding the location of the center, four staff members and one student pointed out that the location of the center was inconvenient, the offices were small, and there was inadequate equipment, affecting the provision of services. Three staff members also expressed their point of view regarding the lack of diagnostic services at the support center,

noting how this shortfall affects the provision of support services and the limitation of any associated negative impacts on students with LD.

This finding aligns with previous studies in the existing literature. Hadley (2017) found students with LD were often confronted by a scarcity of qualified note-takers. In another study, Hadley and Satterfield (2013) found students with LD were not satisfied with the type and level of available support services such as writing labs were not useful and did not focus on their needs, leading them to demand improvements. Furthermore, in O'Shea and Meyer's study (2016) students with LD described the disability services resources office as limited instead of supportive.

Alkhashrami (2008) remarked that financial and human resources are scarce at support services centers, and the number of professionals who work with students is limited. Arafah and Mohammed (2015) also stressed that students with disabilities are not satisfied with the services provided for them at Almajmaah University in S.A., believing that the role of the support services center is ineffective and insufficient. Students with disabilities recommend additional services be put in place to support them, alongside interesting activities that assist with learning and social engagement.

**Staff Knowledge of LD at the Higher Education Level.** In this study, three staff members agreed that there is a lack of knowledge and insufficient information about students with LD in post-secondary as opposed to previous levels of education. One staff member spoke about the importance of receiving training from specialists and professionals in the field of learning disabilities; her background was in Islamic Studies, and even with seven years' experience working with students with disabilities, she had only recently begun to work with a student with LD. The previous director and current committee member of the support center

found that employees should improve their knowledge and work on developing their understanding of students with LD needs at the post-secondary level.

**Internships and Job Training.** Four student participants discussed some of their worries, including higher education, internships, future jobs, and their chance to be independent people. They also addressed their concerns regarding life following graduation from the university. For example, two students thought they would have less of a chance to complete higher education or get a job because of their LD, and they were also worried they might not be accepted as an employee in some sectors.

Three staff members, AE2, AE3, and BE5, found the provision of vocational training and work that focused on improving students' job skills and supporting their interests was necessary to prepare them for the labor market. Support for students with LD should not be limited to academic areas and should look beyond the degree itself.

### **Social and Emotional Challenges**

According to four student participants and four staff member, students with LD face a variety of social and emotional obstacles. These obstacles included social interaction, stigma, and emotional issues. These findings align with those found in the literature. Elksnin and Elksnin (2004) and Nelson and Harwood (2011) found that students with LD experience additional social and emotional challenges during their academic journey in comparison to their peers without LD.

#### ***Social Interaction***

Three student participants and three staff members identified issues with the development and building of relationships, alongside the ability to have good interactions with friends, classmates, and relatives. The students with LD had a limited number of friends and found it difficult to initiate small talk or develop friendships with their classmates, leading them to feel

neglected and abandoned. One staff member indicated that positive social interactions and the building of friendships are attainable if the students do not have emotional issues or psychological problems, and have a sense of self-awareness regarding their LD, and family support. The absence of these elements has the potential to affect the student's personality and sociability. For instance, one student in this study confronted a challenging situation with her family. She described her relationship with her parents and her siblings as very limited; only two of her sisters knew about her LD because they helped her with her assignments at times, but the rest of her family were unaware.

These findings are in line with those of the existing literature. Rodis, Garrod, and Boscardin (2001), Cawthon and Cole (2010), and McGregor et al. (2016) pointed out that students with LD confront a number of social challenges in college relating to both friendships and other relationships. They may, for instance, have few friendships or face difficulties in communicating with colleagues and faculty members. In addition, Couzens et al. (2015) noted that students with LD face difficulties with effective communication and also encounter problems in group sessions.

### ***Stigmatizing***

Three student participants and four staff members (AS2, AS3, AS4, AE1, AE2, AE3, and BE5) indicated students with LD felt uncomfortable revealing their LD due to the fear of stigma, indicating they care about their peers' perceptions. Students with LD preferred not to disclose their disability to friends or relatives to avoid negative attitudes, pitying looks, or disrespectful treatment. Two staff members emphasized students with LD would have either limited or no support from their classmates. Two staff members also pointed out that students might face social stigma related to the perceptions surrounding their future job or marriage prospects when

others identified them as having a learning disability. These families denied their daughters' needs as a result of social stigma or the stereotypes surrounding the association of having their disability identified in the national records. There is the perception that if their child's LD were recorded, it would reduce their chances of getting a job or getting married, causing them to be undervalued in society. These findings are supported by Lightfoot, Janemi, and Rudman (2018), DeLee (2013), and Denhart (2008) who note that several aspects of students' lives could be affected by stigma, such as their self-perception, communication with teaching faculty, and communication with peers.

### ***Emotional Issues***

Four student participants and four staff members (AS1, AS2, AS3, AS4, AE1, AE2, AE4, and BE5) shared that students with LD experience some negative feelings, such as stress, loneliness, anxiety, shyness, and frustration. These feelings, as described by the students, were related to several factors, such as the pressure that accompanies their workload, future concerns regarding their internship and job, independent living, friendships and other relationships, or perhaps a combination of these reasons.

Some of these feelings, such as shyness, might prevent the students with LD from seeking support from the center or minimize their chances of receiving adequate support because they will not advocate for themselves. As one staff member noted, when students are very shy, they do not express themselves or discuss their needs and feelings with the staff. As a result, it takes them a long time to be comfortable enough to talk about what they need.

In addition, their previous negative social experiences might emotionally affect the students. For instance, one student in this study had unfavorable experiences in the earlier phases of her education (elementary school). She had been bullied in school because of her disability,

which made her feel embarrassed and ashamed of herself, negatively impacting her personality in turn.

Research has found that students with LD in postsecondary education may experience emotional issues, such as anxiety, depression, and frustration (Arthur, 2003; Ceci, 2013; Hadley, 2017; Zysberg & Kasler, 2017). These findings align with the conclusions of this study regarding the emotional issues experienced by students with LD. Furthermore, these findings are in line with those of Connor (2013), Hartman-Hall & Haaga (2002), Rosenstreich et al. (2015), Rodis, Garrod, and Boscardin (2001), and Hadley and Satterfield (2013) indicating students with LD experience poor or lower self-esteem, poor self-perception, loneliness, anger, and embarrassment.

## **RQ2. What Strategies and Skills Did the Support Services Staff and Students with LD Find Effective in Overcoming Challenges During Post-Secondary Education?**

There are a number of key findings regarding the strategies and skills that students use to overcome their challenges. Support is one major category with four subcategories that include accommodations and academic support, strategies and skills, social and emotional support, and factors that enhanced students' success

All of the participants emphasized the importance of the types of support provided by the support services center. Students with LD have numerous advantages as a result of the services that are provided for them, such as extended time for assignments or exams, private rooms for exams, adapted assignments and curriculums, peer tutoring, workshops and courses supporting students with their assignments, help with their social and emotional issues, and support with future career choices. This finding is aligned with Cooper's (2015) research, pointing out students with LD can attain advantages and accommodations from the university's support services that assist them to be successful in college.



## **Accommodations and Academic Support**

In this study, students with LD received different types of accommodations and support, such as extended time for exams and assignments, adapted formatting for exam questions, a private room for exams, an adapted curriculum and assessment method, peer tutoring, the use of a reader, larger font for exam questions, the use of a separate table in class, permission to record the lectures, the use of a note-taker, alternative assessments or class requirements, extra support in English, and involvement in social activities. The support services centers also offer additional support, such as financial support and a variety of workshops. Furthermore, the centers communicate with the faculty members through email, providing them with the student's statement letter, and encouraging faculty to discuss any issues related to the student's situation.

### ***Peer Tutoring***

After assessing the needs of a student with LD, staff members at the support services center search for students to assist their peers with their courses and assignments. Four staff members (AE1 AE2, AE3, and AE4) pointed out peer tutoring was the most beneficial support for students with LD, particularly if the tutors are majoring in special education. These tutors demonstrate an awareness of the needs of students with LD, alongside effective strategies that can be used to assist them. One staff member spoke about the benefits of peer tutoring sessions and stated they had a positive effect on the students' performances and GPA. Furthermore, the students in question became more excited about studying and cared more about their success. From the staff members' perspectives, students with LD improve on receipt of peer tutoring because their peers are within the same age group and level of education; they are taking similar classes and know about the class requirements and assignments. Thus, students with LD would listen to their peers and communicate with them to a greater extent than their professors. Some

studies support these staff members' perceptions of peer tutoring. For example, Hadley and Satterfield (2013) noted students with LD could benefit from academic services such as counseling and tutoring. Likewise, Vogel, Fresko, and Wertheim (2007) found peer tutoring is often used in support services centers to help students with learning disabilities to succeed in higher education, and DuPaul, Dahlstrom-Hakki, Gormley, Fu, Pinho, and Banerjeel (2017) found that tutoring and coaching are the most useful strategies to assist students with LD.

### ***Workshops and Courses***

Two student participants and three staff members (AS1, AS4, AE1, AE2 and AE3) expressed positive attitudes about the outcomes of the workshops and courses offered through the center or university. During these workshops, students would learn fundamental skills such as time management, self-development, stress management, and the use of Blackboard. Through these workshops, students with LD would also engage with several new and different learning strategies, such as concept maps and sketch notes. According to two students included in this study, they are putting increased effort into attending these courses and workshops because they appreciate the benefits of them. One student emphasized that she learned a lot about writing a research paper, leadership skills, and speech-based skills throughout these workshops. The supportive environment of the support center, therefore, improves these students' academic outcomes. This is supported by Zeng, Ju, and Hord (2018), who also found students with LD noticed general academic improvements as a result of the supportive environment.

### **Strategies and Skills**

All of the participants noted that students with LD use strategies to deal with their academic difficulties.

### ***Memorizing***

According to Richards and Schmidt (2013), “Memorizing is the process of establishing information in memory. The term memorizing refers to the conscious processes” (p. 199). In this study, four student participants used memorizing as a strategy to help them with their exams and classes. Based on their experiences in previous stages of education, such as high school, students in the study continue to use memorizing as an academic strategy in university. However, one student realized that memorizing is not as effective at the post-secondary level due to the heavy workload and amount of information involved. As a result, the student participating in this study might instead combine memorizing with another strategy, or with additional support from peer tutoring, self-teaching, or help from family members and friends. According to two students, however, memorizing was compulsory for some classes or topics. Students are required to memorize theories or the Holy Quran and must recall the relevant information without mistakes.

### ***Concept Maps***

Concept maps, as defined by Villalon and Calvo (2008) “are visual representations of knowledge, widely used in educational contexts” (p. 357). The findings of this study showed all of the students have used concept maps for studying and reviewing their chapters. This strategy, as eight participants have described, is very helpful for the students with LD. One staff member remarked that when students with LD use concept maps in one class, they are able to generalize the technique to another class, and noted the generalization of this strategy was one of their strong points. In addition, two students included in this study learned how to adapt or create their own way of using concept maps by a process of trial and error. For instance, one student first wrote the information as a list and then summarized it, after which she created her concept maps. These results are supported by the literature. Heiman and Precel (2003) found that students with

LD link information by creating maps or writing outlines.

### ***Technology***

According to the findings, four of the students use technology in different ways. During the study, the students emphasized technology is a beneficial resource supports their learning and confirmed that the tool they use most is YouTube. The use of technology such as YouTube, language applications, and iPhone features assists them in finding examples for their assignments, or writing guidelines to help them to complete their essays. One student found computer games enabled her to improve her reading skills, while another student used an iPhone's feature as a writing tool. Cawthon and Cole (2010) found that using assistive technology is one of the most common accommodations provided to students with LD, and has been shown to make a significant difference to their educational results. However, the results of this study showed there are limitations to the use of assistive technology since the students used only three different types: YouTube, iPhone features, and computer games. The absence of other types of assistive technology, such as different devices or software, may be the result of language differences. Since most of these technologies use English or Spanish as their primary languages, students may struggle to engage with them (Alquraini, 2011).

### ***Time Management***

The results showed only two students were able to manage their time to study or complete their assignments. According to their responses, organizing a daily, weekly, and monthly schedule was the most important step, and allowed them to work effectively on their projects and assignments. Both students also stressed that working early in the day and going to the university on their days off was a useful way to study and complete class requirements. One staff member pointed out that students with LD learned valuable skills by working with the

support services center, one of which was time management skills. She emphasized that students learn how to organize their classes and schedules during their meetings with the staff at the center. The two students included in this study were doing well in their classes and had received some good grades in their assignments, which may be due to their time management skills. Zeng, Ju, and Hord (2018) found learning different study strategies and skills, such as time management, led to greater success for students with LD at the postsecondary level.

### **Social and Emotional Support**

All of the participants noted that support and encouragement from family, friends, faculty members and staff at the center were important to the students with LD both before and after enrolling in the university. From the students' perspective, this support and encouragement had a positive impact on them and on different aspects of their academic, social, and emotional lives.

The impact of the support given by teachers in middle and high school was evident in one student included in this study, acting as an assistant factor that helped the student to determine her strengths and needs. Together, these supportive teachers worked to create a transition plan for the student throughout each of her educational stages. AS1 was the only student with a transition plan, and even if it was not comprehensive, it helped her to accelerate the process of receiving support from the center.

Four staff members stressed that their support was significant and beneficial to the students. Students with LD had good relationships with the staff, and staff worked together or with professionals from other specialties, such as social workers or psychologists to meet the students' needs. Additionally, the staff members indicated students benefitted from workshops to deal with stress, improve their communication skills, and adjust to college life. One staff member shared an interesting way to promote the social and communication skills of students with LD;

she created a group in WhatsApp and included all of her students with LD in it. Students with LD used the group to talk about their experiences, and ask about the issues they encountered. The use of social media applications is helpful in supporting students with LD. It allows them to learn more about LD, their rights, LD organizations, and new learning strategies.

The findings showed all of the student participants have a close friend who supports, teaches, and encourages them—in secondary school or university. Two students noted they became more social and had a greater number of friendships at the post-secondary level than they did in high school. As reported by the staff members, the growth in their relationships may be the result of several different factors, such as the connection and communication with peers during peer tutoring sessions, which helps with the development of their social skills, or attending the workshops and courses provided through the center. These findings align with those of Griffin et al. (2016), indicating that students benefit from relationships with their mentors. In addition, students with LD had improved experiences and improved personal development when interacting with other individuals.

All participants noted the collaborative efforts of faculty members in providing the required accommodations for students with LD play a significant and supportive role, especially when it comes to the exams or assignments. They also noted most of the faculty members were willing to assist and support the students with LD.

### **Factors that Enhanced Students' Success**

In this study, it was found there are a number of factors contribute to students' success, such as self-awareness, a desire to learn, and self-improvement. Four students admitted they were facing difficulties before enrolling in the university, and realized they were educationally different when compared to their colleagues. This self-awareness motivated the students to seek

help and obtain assistance from the support services center. All students had a strong desire to learn, overcome obstacles, and prove themselves as capable students and independent people.

Three students expressed their intentions to complete their higher education. Two of them were very optimistic and showed a strong commitment to their goals. All students shared that they were working hard, were motivated, and were capable of teaching themselves because they had the desire to learn, achieve their goals, and be independent. One student noted that she depends on self-teaching to improve her study and research skills, learning the English language in summer, or in her free time. Two students also attended workshops and courses at the university to improve their writing skills, social skills, and develop their personalities. The students highlighted the importance of these workshops and appreciated their benefits.

### **RQ3: What Do Students with LD and Support Staff Recommend and Suggest to Improve Services?**

The participants made several suggestions for the improvement of services at both centers, including efforts to increase awareness about LD and the support services centers, provide transition services and an online documentation system to connect general and higher education, having a full team that provides diagnosis services, and an increase in support sessions, workshops, and vocational training.

#### **Awareness**

Three students and three members of staff (AS1, AS2, AS4, AE1, AE3, and BE5) stressed the necessity of raising awareness regarding learning disabilities as well as the support services center and its services, stating that it would make a difference for students with LD. One student said that an increased knowledge and understanding of LD would help her in the process of securing accommodations from her professors. Three staff members emphasized the importance of educating other university staff and faculty members by offering workshops and

sessions to help them obtain sufficient knowledge of LD. In addition, there should be workshops and meetings to educate students with LD about their rights and offer them opportunities for self-advocacy. The need to raise awareness results from the lack of knowledge among faculty, the staff at the university, and students about LD, types of LD, students' characteristics, and the services that are provided for them.

### **Transitional and Online Documentation System**

Four staff members described the necessity of an online documentation system would list all of the students with disabilities. This electronic system would include all of the students' information, their IEPs, and the services they previously received. As such, this system would form a connection between general and higher education. The staff members also stressed the importance of having an online documentation system within the university itself to facilitate communication between the center, admission office, and registration office. This system would link all of the available information about students with disabilities and improve the process of delivering support and services. One staff member remarked it would be beneficial if the staff provided weekly or monthly reports about the students, including information on their progress, the issues they are facing, and any other academic, social, or emotional updates.

The previous director and current committee member of the center emphasized three essential factors regarding students with LD: activating IEPs, the implementation of transition plans for students with LD at all educational levels, and the development of a transition program at the university. As noted in the literature, even though the policies and procedures supporting the rights and services of individuals with disabilities have been in effect for many years, they are not always implemented and well-practiced in S.A. (Alharbi & Madhesh, 2018; Aljadid, 2013; Alnahdi, 2014; Alquraini, 2011). For instance, transition policies for students with



disabilities, including students with LD do exist, but in reality, they are not readily available, and RSEPI does not specify a specific age to start the transition plan (Alquraini, 2014). As a result, the creation of a transition plan for a student with LD may be ambiguous for special education teachers when they work with students with LD. In this study, only one student had an IEP and transition plan in elementary and secondary school. Despite this, her transition plan included inadequate information about her performance, strengths, needs, and interests. Thus, preparing students with LD for post-secondary education from an early stage and activating their IEPs and transition plans are crucial for facilitating their enrolment and ensuring they receive appropriate accommodations. The staff member suggested that the involvement of one professional in the student's transition plan while they were still in high school would avoid postponing the provision of accommodations and avoid negative consequences for the student's success. She recommended that universities develop transition programs in the freshman year to assist students with LD; international experience, such as best practices that have been established for students with LD in the U.S., could also be utilized in the implantation of transition services.

The current director of the center believes that screening for all students in their freshman year would help to identify at-risk students and help to prevent students from struggling academically in the future. She also suggested a consultation center should be established, alongside a hotline to support students or employees with LD at the university. The establishment of such services would mean that students with LD and the members of staff working with them could ask questions or share their problems and receive advice and guidance in response.

## **Teamwork and Diagnostic Services**

All of the staff members included in this study stressed the importance of having a full team, including additional staff such as a psychologist, social worker, physical and occupational therapist, and speech-language therapist. One staff member noted some students need IQ tests, LD assessments, or psychological consultations. Other students have family issues or emotional disorders; thus, access to a psychologist and social worker is of fundamental importance for students with disabilities.

Three staff members indicated the diagnostic service is the most critical aspect of their work, but pointed out there is a lack of professional diagnostic tools for adult students with LD. According to the staff members included in this study, most of the evaluation and assessment tools at special education centers or LD organizations are not appropriate for college students. The tools used for assessment are designed for either elementary students or students younger than 16. The provision of an appropriate diagnostic service would avoid delays for students who require support and accommodations for their LD.

## **Support Sessions, Workshops, and Vocational Training**

Four staff members and three students' noted additional support sessions, peer tutoring, and workshops are necessary and provide an advantage to the students who engage with them. Thus, expanding these services would improve the study skills, time management, and job skills of students with LD. Due to the positive impact of these services on students' academic performances and social and personal lives, participants suggested that they be expanded and developed further. One student appreciated these workshops because she had developed her academic skills, personal skills, and social skills. These workshops enriched her resume, which would help her in her future job search.

Two staff members suggested that vocational preparation and job training are needed to develop students' future employment prospects. In one staff member's opinion, the center should work on providing vocational training to achieve the university's vision and prepare students for the labor market. Two staff members noted focusing on the interests and strengths of students with LD is essential for their empowerment, and to give them the opportunity to explore additional job opportunities related to their interests. Hence, the support services center may expand its services in the future and connect with vocational agencies or training centers. In turn, these vocational agencies or training centers would allow the students to become involved in a real work environment and assist them in practicing and improving their knowledge.

### **Implications for Practice**

This study focused on the challenges students with learning disabilities encounter at two Saudi universities, explored the strategies and skills used to overcome these challenges, and reviewed the suggestions made by both student participants and staff members for the further development of support services.

Students with learning disabilities may face fewer academic, social, and emotional challenges during their time at the university if the university administrators consider the following factors. First, the absence of written policies at the two universities is an issue; the support services centers must develop and provide written policies to avoid future complications, such as delays in providing accommodations, and to clarify the rights for students with LD. These policies must be available and accessible for staff, faculty, and students at the university. Second, there must be diagnostic services that incorporate all of the necessary assessment tools appropriate for students' ages. These services should be in place at the universities, and in special education centers or organizations. Third, universities must develop a transition program

to help students successfully navigate their new environment. Orientation programs and introductory presentations will assist students' familiarity with university life, the educational system, and new and/or different teaching styles. Fourth, universities must have full teams available to serve students and their needs, including psychologists, social workers, speech and language therapists, nurses, and physical and occupational therapists. Directors of the support centers must take into consideration the educational background of their staff members. If staff members have a limited understanding of LD, they should participate in an intensive course about LD, students' characteristics, and the strategies used to support them.

Special education administrators must focus on the implementation of special education services for students with LD, and ensure their IEPs are designed appropriately, effectively and include transition plans. Furthermore, administrators must provide professional development for special education teachers at secondary schools to attain an adequate understanding of transition plans, their timeframe, and the consideration of the student's interests, strengths, and needs. Special education administrators must also consider the involvement of students and their family members in the creation of a transition plan and educate them about students' rights in post-secondary education. Special education counselors and administrators must focus on the provision of courses or services for students with LD before they register in university to facilitate the students' smooth enrollment and subsequent academic journey. Special education administrators must increase awareness about post-secondary students with LD among students, faculty members, and staff at public and private universities, paying particular attention to their characteristics and their rights.

In this study, students with LD received several accommodations, such as extended time, an adapted format for both course curriculums and exam questions, and the use of a private room

for exams. The most useful accommodation was peer tutoring, and the students also frequently used concept maps for their courses and assignments. The students included in this study appreciated the different types of workshops and courses provided at the university or through the center. The support centers must focus on the successful accommodations, services, and strategies that assist students with LD. Additionally, they must explore and discover a variety of new accommodations, strategies, and services to support students with LD. To achieve the goals of Saudi Vision 2030, Saudi universities must consider vocational training and job preparation for students with LD. Saudi universities must cooperate with organizations and vocational agencies to provide job training for students with LD and give them the opportunity to master their skills.

### **Limitations of the Study**

There are several limitations to this study:

1. The data in this study cannot be generalized for the following reasons: the small number of participants were female students and staff. No male participants with LD were found in either of the two universities.
2. The data were collected for this qualitative study by interviewing five female students and five female staff members at only two public universities in one region in Saudi Arabia (Riyadh). Thus, the findings of this study cannot be generalized to other support services centers or private universities, or to male or female students with learning disabilities across different regions in Saudi Arabia.
3. Another limitation relates to the staff participants. One staff member refused to participate in this study because she was not comfortable recording the interview. Another staff from University B, who refused to participate, did not explain her reasons but she was the only

staff member with major in special education. Most staff members at University B have majors unrelated to learning disabilities, such as mathematics or Islamic studies.

### **Recommendations for Future Research**

The findings from this study show that students with learning disabilities are confronted by several challenges both before and during the receipt of support services at the two public universities. The results may assist support services centers at Saudi universities to develop these services and improve the process of obtaining accommodations from the university. Based on the findings of this study, there are several areas of recommended research connected to the research questions, themes and subthemes (see Table 18), including:

1. A qualitative study investigating the transition plans and processes for female and male students with learning disabilities in high schools.
2. A study exploring accommodations, strategies, and technology provided for male and female students with learning disabilities in secondary education. Determining the extent of these services and accommodations is essential to understanding their impact and whether they have a positive or negative effect. This information would then assist with students' transition to university or college.
3. A study could be conducted to address the obstacles that prevent or limit the implementation of the policies and legislation supporting students with LD in higher education.
4. A study investigating the awareness exists among faculty members, students, and their families of learning disabilities and the services that are available at the post-secondary level.
5. A qualitative study exploring the relationship between students with LD and their family members/professors.

**Table 18**

*Recommended Research Related to the Research Questions, Themes and Subthemes*

Recommended Research	Related Research Questions	Related Themes and Subthemes
1. A qualitative study investigating the transition plans and processes for female and male students with learning disabilities in high schools.	Q1. What are the challenges students with LD face at the beginning and during postsecondary education?  Q3. What do students with LD and support staff recommend to improve services?	Q1. Theme One: Pre-University Challenges -Subtheme: b) Lack of previous special education services Q3. Theme Five: Suggestions Subtheme: b) Transition and online documentation system
2. A study exploring accommodations, strategies, and technology provided for male and female students with learning disabilities in secondary education. Determining the extent of these services and accommodations is essential to understanding their impact and whether they have a positive or negative effect. This information would then assist with students' transition to university or college.	Q2. What strategies and skills did the support services staff and students with LD find effective in overcoming challenges during postsecondary education?	Q2. Theme Four: Support Subthemes: (a) Accommodations and academic support (b) Strategies and skills (c) Social and emotional support
3. A study could be conducted to address the obstacles that prevent or limit the implementation of the policies and legislation supporting students with LD in higher education.	Q1. What are the challenges students with LD face at the beginning and during postsecondary education?	Q1. Theme One: Pre-University Challenges Subthemes: (a) Lack of diagnosis documentation (b) Lack of previous special education services

Table 18—Continued

Recommended Research	Related Research Questions	Related Themes and Subthemes
4. A study investigating the awareness that exists among faculty members, students, and their families of learning disabilities and the services that are available at the post-secondary level.	<p>Q1. What are the challenges students with LD face at the beginning and during postsecondary education?</p> <p>Q3. What do students with LD and support staff recommend to improve services?</p>	<p>Q1. Theme One Pre-University Challenges Subthemes: (a) Lack of diagnosis documentation (b) Lack of previous special education services (c) Lack of disability disclosure Q3.Theme Five: Suggestions Subtheme: a) Awareness</p>
5. A qualitative study exploring the relationship between students with LD and their family members/professors.	<p>Q1. What are the challenges students with LD face at the beginning and during postsecondary education?</p> <p>Q2. What strategies and skills did the support services staff and students with LD find effective in overcoming challenges during postsecondary education?</p>	<p>Q1. Theme One: Pre-University Challenges -Subthemes: (a) Lack of diagnosis documentation (b) Lack of previous special education services Q1. Theme Tow: Academic Challenges Subtheme: (d) Faculty members Q1. Theme Three: Social and Emotional Challenges Subtheme: (a) Social interaction Q2. Theme Four: Support for Students with LD Subtheme: (c) Social and emotional support</p>



## **Summary**

This study aimed to explore the challenges and obstacles confronting students with LD who received assistance from support service centers at S.A. universities. In addition, the study investigated the strategies and skills students used to overcome these challenges and reviewed the suggestions for the development of such services. According to the responses of student participants and the staff members, several challenges were addressed. These challenges included pre-university challenges, academic challenges, and social and emotional challenges. There were also several supports that student with LD received and strategies they used to assist overcoming these challenges, including accommodations and educational support, social and emotional support, strategies and skills, and factors that enhanced the success of students with LD. This study detected several key suggestions from the participants, which they believe would contribute to the development of the support services. These suggestions included awareness, transition and online documentation systems, teamwork and diagnostic services, and support sessions, workshops and vocational training.

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**Appendix A**  
**Interview Protocol for Students (English)**

## Interview Protocol for Students (English)

Project: A Qualitative study investigating post-secondary services for students with learning disabilities at Saudi universities

Time of interview: \_\_\_\_\_  
Date of interview: \_\_\_\_\_  
Location: \_\_\_\_\_  
Interviewer: \_\_\_\_\_  
Interviewee: \_\_\_\_\_

**Thank you for consenting to participate in this study. I would like to record the interview so the study can be as accurate as possible. You may request that the tape recorder be turned off at any point of the interview.**

*Before starting the interview, I would like to thank you for participating in this study about the experiences of students with learning disability at post-secondary level at Saudi universities. The purpose of this study is to explore the challenges and the obstacles that face the students with learning disabilities during their study, determine the strategies that students and staff of the support services center apply to overcome these challenge, and how do they describe the additional services that can improve the provided services and assist the students to success in their journey.*

1. Tell me about yourself?
2. describe your specific learning disability?
3. how did you know that you have learning disability?
4. how did you decide that you were going to attend college?
5. how has your learning disability affect your academic learning, social and personal life?
6. what do you think are the biggest challenges for you as a student with learning disability in higher education?
7. How did you know about the center?
8. What ways you have used to deal with your learning disabilities?
9. Explain any special education services you received in high school?
10. Do you prepare any strategies for yourself before and during enrolling at university?
  - a. prop: what are some strategies that have been successful, please provide specific examples.
  - b. Prop: what are some strategies you have tried but have not been successful, please explain why do you think that strategies have not been successful?
11. Can you explain all kind of support that you received from the center?
12. How do your professors help you in classes?
13. what are the skills that you learn to overcome academic, social, personal issues related to you learning disabilities?
14. what are additional support do receive out of the university?

- a. Prop: are you a member of any learning disabilities organizations?
  - b. Prop: do you have tutoring sessions?
  - c. Prop: do you receive parent, friend supports?
15. What are additional services that you think will valuable for the students with learning disabilities at the center?
16. What are the suggestions that you think will improve the services for the students with learning disabilities?
17. Is there anything else you could share with me that might provide insights or shed more light on this topic? Is there anything else I should have asked to gain a more comprehensive understanding of this topic?

**Thank you for participating in this interview. If necessary, may I contact you for a follow up interview or to clarify some of your responses?**



## **Appendix B**

### **Interview Protocol for Staff Members of the Support Services Center (English)**

## Interview Protocol for Staff Members of the Support Services Center (English)

Project: A Qualitative study investigating post-secondary services for students with learning disabilities at Saudi universities

Time of interview: \_\_\_\_\_  
Date of interview: \_\_\_\_\_  
Location: \_\_\_\_\_  
Interviewer: \_\_\_\_\_  
Interviewee: \_\_\_\_\_

**Thank you for consenting to participate in this study. I would like to record the interview so the study can be as accurate as possible. You may request that the tape recorder be turned off at any point of the interview.**

*Before starting the interview, I would like to thank you for you participating in this study about the experiences of students with learning disability at post-secondary level at Saudi universities. The purpose of this study is to explore the challenges and the obstacles that face the students with learning disabilities during their study, determine the strategies that students and staff of the support services center apply to overcome these challenge, and how do they describe the additional services that can improve the provided services and assist the students to success in their journey.*

- Tell me about yourself, level of education, your specialization, years of experience, and your work as professional at the disability support center?
  - How do you think the learning disability affect the students' academic learning, social and personal life?
  - What do you think are the biggest challenges for students with LD in higher education?
  - Can you explain all kinds of support that you provide at the center?
  - center?
  - how did the students know about the center?
  - How do the professors deal with the students with LD?  
what are the strategies and skills that students learn at the center to overcome academic, social, personal issues related to their LD?  
prop: what are some strategies that have been successful, please provide specific examples.  
Prop: what are some strategies you have tried but have been not successful please explain why do you think these strategies did not work well?
1. What are additional services that you think will be useful for the students with LD at the center?
  2. What are the suggestions that you think will improve the services for the student with LD?
- Is there anything else you could share with me that might provide insights or shed more light on this topic? Is there anything else I should have asked to gain a more comprehensive understanding of this topic

**Thank you for participating in this interview. If necessary, may I contact you for a follow up interview or to clarify some of your responses?**

## **Appendix C**

### **Interview Protocol for Students (Arabic)**

## Interview Protocol for Students (Arabic)

جامعة غرب ميشيغان ، الولايات المتحدة الأمريكية  
قسم التربية الخاصة  
اسئلة المقابلة للطلاب/الطالبة

عنوان الدراسة: دراسة نوعية تبحث في خدمات ما بعد المرحلة الثانوية للطلاب ذوي صعوبات التعلم في الجامعات السعودية  
وقت المقابلة: \_\_\_\_\_

تاريخ المقابلة: \_\_\_\_\_

مكان المقابلة: \_\_\_\_\_

المشارك بالمقابلة: \_\_\_\_\_

أود ان اشكر على موافقتك للمشاركة في هذه الدراسة. أود تسجيل المقابلة حتى تكون الدراسة دقيقة قدر الإمكان. يمكنك أن تطلب إيقاف تشغيل جهاز التسجيل في أي نقطة من المقابلة.

قبل البدء بالمقابلة، أود أن أشكر على مشاركتك في هذه الدراسة حول تجارب الطلاب ذوي الإعاقة في التعلم في مرحلة ما بعد المرحلة الثانوية في الجامعات السعودية. الغرض من هذه الدراسة هو الكشف عن التحديات والعقبات التي تواجه الطلاب ذوي صعوبات التعلم في المرحلة ما بعد الثانوية، وتحديد الاستراتيجيات التي يطبقها الطلاب والموظفون في مركز الخدمات المساندة للتغلب على هذه التحديات، وكيف يصفون الخدمات التي يمكنها تحسين الخدمات المقدمة ومساعدة الطلاب على النجاح في مسيرتهم التعليمية.

١- هل يمكنك ان تحدثني عن نفسك؟

٢- ماهي صعوبة التعلم التي لديك؟

٣- كيف عرفت أن لديك صعوبات تعلم؟

٤- كيف قررت الالتحاق بالجامعة؟

٥- كيف أثرت صعوبات التعلم على ادائك الأكاديمي والحياة الاجتماعية والشخصية؟

٦- ما هي أكبر التحديات التي تواجهك كطالب مع في المرحلة الجامعية او التعليم العالي؟

٧- كيف عرفت عن المركز؟

٨- ما الطرق التي تستخدمها للتعامل والتعايش مع صعوبات التعلم لديك؟

٩- اشرح أي خدمات تربوية خاصة تلقيتها في المدرسة الثانوية؟

١٠- هل قمت او تقوم بإعداد أي استراتيجيات لنفسك قبل وأثناء التسجيل في الجامعة؟

- ما هي بعض الاستراتيجيات التي نجحت، يرجى تقديم أمثلة محددة.

- ما هي بعض الاستراتيجيات التي قمت بتجربتها ولكن لم تكن ناجحة، يرجى توضيح لماذا تعتقد أن هذه الاستراتيجيات لم تكن ناجحة او جيدة؟

١١- هل يمكنك شرح كل أنواع الدعم التي تلقيتها من المركز؟

١٢- كيف يساعدك أساتذتك / أعضاء هيئة التدريس في محاضراتك؟

١٣- ما هي المهارات التي لديك او تعلمها للتغلب على الامور او المشاكل الأكاديمية والاجتماعية والشخصية المتعلقة بصعوبات التعلم لديك؟

١٤- ما هو الدعم الإضافي الذي تحصل عليه من الجامعة؟

- هل أنت عضو في أي من منظمات او جمعيات الدعم لذوي صعوبات التعلم؟

- هل لديك دروس تعليمية اضافية او خارجية؟

- هل تتلقى دعم او مساعدة من الوالدين، او الأقارب، او الأصدقاء صديق يدعم؟

١٥- ما هي الخدمات الإضافية التي تعتقد أنها قد تكون ذات قيمة بالنسبة للطلاب ذوي صعوبات التعلم في مركز الخدمات المساندة؟

١٦- ما هي الاقتراحات التي تعتقد أنها ستعمل على تحسين الخدمات للطلاب ذوي صعوبات التعلم؟

١٧- هل هناك أي شيء آخر يمكنك مشاركته معي قد يقدم رؤى أو يسلط المزيد من الضوء على هذا الموضوع؟ هل هناك أي شيء آخر كان يجب أن أطلبه للحصول على فهم أكثر شمولاً لهذا الموضوع؟

شكرا لك على المشاركة في هذه المقابلة. إذا لزم الأمر، هل يمكنني الاتصال بك لإجراء مقابلة متابعة أو لتوضيح بعض ردودك؟

## **Appendix D**

### **Interview Protocol for Staff Members (Arabic)**

## Interview Protocol for Staff Members (Arabic)

جامعة غرب ميشيغان، الولايات المتحدة الأمريكية  
قسم التربية الخاصة  
اسئلة المقابلة لموظفي مركز الخدمات المساندة

**عنوان الدراسة:** دراسة نوعية تبحث في خدمات ما بعد المرحلة الثانوية للطلاب/طالبات ذوي صعوبات التعلم في الجامعات السعودية  
وقت المقابلة: \_\_\_\_\_  
تاريخ المقابلة: \_\_\_\_\_  
مكان المقابلة: \_\_\_\_\_  
المشارك بالمقابلة: \_\_\_\_\_

اود ان اشكرك على موافقتك للمشاركة في هذه الدراسة. اود تسجيل المقابلة حتى تكون الدراسة دقيقة قدر الإمكان. يمكنك أن تطلب إيقاف تشغيل جهاز التسجيل في أي نقطة من المقابلة.  
قبل البدء بالمقابلة، اود أن أشكركم على مشاركتكم في هذه الدراسة حول تجارب الطلاب ذوي صعوبات في التعلم في المرحلة ما بعد الثانوية في الجامعات السعودية. الغرض من هذه الدراسة هو الكشف عن التحديات والعقبات التي تواجه الطلاب ذوي صعوبات التعلم في المرحلة ما بعد الثانوية، وتحديد الاستراتيجيات التي يطبقها الطلاب والموظفون في مركز الخدمات المساندة للتغلب على هذه التحديات، وكيف يصفون الخدمات التي يمكنها تحسين الخدمات المقدمة ومساعدة الطلاب على النجاح في مسيرتهم التعليمية.

١- هل من الممكن ان تحدثني عن نفسك، مستوى التعليم، التخصص، سنوات الخبرة، وعن عملك في مركز الخدمات المساندة؟  
٢- كيف تعتقد أن صعوبات التعلم تؤثر على الأداء الأكاديمي للطلاب وحياتهم الاجتماعية والشخصية؟  
٣- ما هي في رأيك أكبر التحديات التي يواجهها الطلاب من ذوي صعوبات التعلم في المرحلة الجامعية اوفي التعليم في التعليم العالي؟

٤- هل يمكنك شرح كل أنواع الدعم التي تقدمها في المركز؟

٥- كيف عرف الطلاب عن المركز؟

٦- كيف يتعامل الأساتذة/ اعضاء هيئة التدريس مع الطلاب ذوي صعوبات التعلم؟

٧- ما هي الاستراتيجيات والمهارات التي يتحلا بها او يجب ان يتعلمها الطلاب في المركز للتغلب على المشاكل او الامور الأكاديمية والاجتماعية والشخصية المتعلقة بصعوبات التعلم لديهم؟

-ما هي بعض الاستراتيجيات التي نجحت وكانت ذات فائدة، يرجى تقديم أمثلة محددة.

-ما هي بعض الاستراتيجيات التي تمت تجربتها ولكن لم تكن ناجحة او مفيدة، الرجاء توضيح لماذا تعتقد أن هذه الاستراتيجيات لم تكن مفيدة او جيدة؟

٨- ما هي الخدمات الإضافية التي تعتقد أنها قد تكون ذات قيمة بالنسبة للطلاب ذوي صعوبات التعلم في مركز الخدمات المساندة؟

٩- ما هي الاقتراحات التي تعتقد أنها ستعمل على تحسين الخدمات للطلاب ذوي صعوبات التعلم؟

١٠- هل هناك أي شيء آخر يمكنك مشاركته معي قد يقدم رؤى أو يسلط المزيد من الضوء على هذا الموضوع؟ هل هناك أي شيء آخر كان يجب أن أطلبه للحصول على فهم أكثر شمولاً لهذا الموضوع؟

شكرا لك على المشاركة في هذه المقابلة. إذا لزم الأمر، هل يمكنني الاتصال بك لإجراء مقابلة متابعة أو لتوضيح بعض ردودك؟



**Appendix E**  
**HSIRB Approval Letter**

## HSIRB Approval Letter

WESTERN MICHIGAN UNIVERSITY



Institutional Review Board  
FWA00007042  
IRB00000254

Date: October 9, 2018

To: Elizabeth Whitten, Principal Investigator  
Nahed Binbakhit, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: IRB Project Number 18-09-41

This letter will serve as confirmation that your research project titled "A Qualitative Study Investigating Post-secondary Services for Students with Learning Disabilities at Saudi Universities" has been **approved** under the **expedited** category of review by the Western Michigan University Institutional Review Board (IRB). The conditions and duration of this approval are specified in the policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may **only** be conducted exactly in the form it was approved. You must seek specific board approval for any changes to this project (e.g., ***you must request a post-approval change to enroll subjects beyond the number stated in your application under "Number of subjects you want to complete the study"***). Failure to obtain approval for changes will result in a protocol deviation. In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the IRB for consultation.

**Reapproval of the project is required if it extends beyond the termination date stated below.**

The Board wishes you success in the pursuit of your research goals.

Approval Termination:

October 8, 2019

Office of the Vice President for Research  
Research Compliance Office  
1903 W. Michigan Ave., Kalamazoo, MI 49008-5456  
PHONE: (269) 387-8293 FAX: (269) 387-8276  
WEBSITE: [wmich.edu/research/compliance/hsirb](http://wmich.edu/research/compliance/hsirb)

CAMPUS SITE: 251 W. Walwood Hall

## **Appendix F**

### **Letter of Invitation to the Administrator of Support Services Center (English)**

## **Letter of Invitation to the Administrator of Support Services Center (English)**

Dear (.....),

My name is Nahed Binbakhit and I am a doctoral candidate in the Special Education Department, Western Michigan University in United State. I am writing to ask if you have students with a learning disability, and staff member who work at the disability center who would be interested in participating in a qualitative research study titled “A Qualitative study investigating post-secondary services for students with learning disabilities at Saudi universities. The purpose of this study is to explore the challenges and the obstacles that face the students with learning disabilities at post-secondary level, determine the strategies that students and staff of the disability center apply to overcome these challenge, and how do they describe the additional services that can improve the provided services and assist the students to success in their journey

Participating in this study will include:

An interview conversation that should last approximately 45-60 minutes and that will be conducted in appropriate time for the participants and in it will be face to face interview. Before beginning this conversation, the interview questions will be submitted to you and it might demand your responses for revision. This conversation will be recorded by a tape recorder, and notes will be taken. If necessary, a follow-up call may be made which will allow me to check for the accuracy of my notes and to ask any follow-up questions I had after reviewing the transcripts of our first meeting.

The criteria to participate in this study are as follows:

Students with learning disability, graduate or undergraduate student, e, receive support service from the support services center and may have additional disability or disorder such as attention deficit and hyperactivity disorder.

Staff member of the support services center.

Participation in this study is completely voluntary and there is no penalty for not participating or for withdrawing from the study. If you agree to participate in this study, your identity will be kept strictly confidential. Your name and the university will not appear in the study. Your stories will be referenced by a pseudo name. All transcripts will be kept on a locked-computer in a secured office in the researcher’s home.

Attached a copy of Requesting Participation Letter that should be sent to students with LD who might be interested in participation.

If you are interested in learning more about participating, please contact me by replying by email [nahedmohammed.binbakhit@wmich.edu](mailto:nahedmohammed.binbakhit@wmich.edu). Or you may feel free to contact me by phone at (0500000000).

Thank you for your cooperation of this request which is helpful for this study. Your response to this email will be appreciated. Sincerely,  
Nahed Binbakhit

## **Appendix G**

### **Letter of Invitation to the Administrator of Support Services Center (Arabic)**

## Letter of Invitation to the Administrator of Support Services Center (Arabic)

### خطاب الى مدير/مديرة مركز الخدمات المساندة

خطاب إلى مدير/مديرة مركز الخدمات المساندة  
(.....) العزيز

اسمي ناهد بن بخيت مرشحة للحصول على درجة الدكتوراه في قسم التربية الخاصة، جامعة غرب ميشيغان في الولايات المتحدة. اعمل حالياً مع المشرفة د. إليزابيث ويتن، لإكمال هذا البحث العلمي لنيل درجة الدكتوراه. اكتب إليكم هذا الخطاب لطلب مساعدتكم لترشيح اسماء طلاب/طالبات ذوي صعوبات تعلم، وموظفين/موظفات يعملون في مركز الخدمات المساندة الذين قد يكونون مهتمين في المشاركة في الدراسة الحالية.

**عنوان الدراسة:** "دراسة نوعية تبحث في خدمات ما بعد المرحلة الثانوية للطلاب/طالبات ذوي صعوبات التعلم في الجامعات السعودية. الغرض من هذه الدراسة هو اكتشاف التحديات والعقبات التي تواجه الطلاب ذوي صعوبات التعلم قبل واثناء الالتحاق بالتعليم بعد المرحلة الثانوية. بالإضافة إلى ذلك، ستلقي الدراسة نظرة عن كثب على الاستراتيجيات والمهارات التي يطبقها الطلاب والموظفون للتغلب على هذه التحديات، وكيف يصفون الخدمات الإضافية أو الدعم الذي من شأنه تحسين الخدمات المقدمة ومساعدتهم على النجاح في مسيرتهم التعليمية.

#### المشاركة في هذه الدراسة سوف تشمل:

مقابلة شخصية فردية تستمر حوالي 45-60 دقيقة وسيتم إجراؤها في الوقت المناسب للمشاركين وفيها ستكون مقابلة وجهاً لوجه. قبل بدء هذه المقابلة، سيتم تقديم أسئلة المقابلة للمشاركين للاطلاع عليها وقد تتطلب إجاباتكم للمراجعة. سيتم تسجيل هذه المحادثة صوتياً، وسيتم أخذ الملاحظات، وقد يتم إجراء مكالمة لاحقة تسمح لي بالتحقق من دقة الملاحظات وطرح أي أسئلة متعلقة بالمقابلة إذا لزم الأمر.

#### معايير المشاركة في الدراسة

١-طلاب/طالبات ذوي صعوبات تعلم في المرحلة الجامعية او مرحلة الدراسات العليا، يتلقون خدمات من مركز الخدمات المساندة، وقد يكون لديهم إعاقة أو اضطراب مثل نقص الانتباه وفرط الحركة.

٢-موظفين/موظفات في مركز الخدمات المساندة.

المشاركة في هذه الدراسة تطوعية تماماً ولا توجد عقوبة لعدم المشاركة أو الانسحاب من الدراسة. إذا وافقت على المشاركة في هذه الدراسة، سيتم الحفاظ على سرية المعلومات (هويتك، اسمك والجامعة) لن تظهر أو تنشر في الدراسة. سيتم الاحتفاظ بكافة الإجابات في جهاز كمبيوتر الباحث في ملف سري ومغلق. الراغبين بالمشاركة سوف ترفق لهم نسخة من خطاب طلب المشاركة.

إذا كنت مهتماً بمعرفة المزيد عن المشاركة، يرجى الاتصال بي عن طريق ر البريد الإلكتروني  
الباحث الرئيسي: ناهد محد بن بخيت

[nahedmohammed.binbakhit@wmich.edu](mailto:nahedmohammed.binbakhit@wmich.edu)

أو في الاتصال عن طريق الهاتف على (000000050).

اسم المشرف على البحث: د. إليزابيث ويتن

[elizabeth.whitten@wmich.edu](mailto:elizabeth.whitten@wmich.edu)

نشكرك على تعاونك للمشاركة في هذه الدراسة. أقدر ردكم على هذا البريد الإلكتروني وتفاعلكم مع طلبي.

مع التحية....

ناهد بن بخيت

**Appendix H**  
**Requesting Participation Letter (English)**

### **Requesting Participation Letter (English)**

Dear (....),

My name is Nahed Binbakhit and I am a doctoral candidate in the Special Education Department, Western Michigan University in United State. I am writing to ask if you are a student with learning disability or staff member at the disability center who would be interested in participating in a qualitative research study titled “A Qualitative study investigating post-secondary services for students with learning disabilities at Saudi universities. The purpose of this study is to explore the challenges and the obstacles that face the students with learning disabilities at post-secondary level, determine the strategies that students and staff of the disability center apply to overcome these challenge, and how do they describe the additional services that can improve the provided services and assist the students to success in their journey.

Participating in this study will include:

An interview conversation that should last approximately 45-60 minutes and that will be conducted in appropriate time for the participants and in it will be face to face interview. Before beginning this conversation, the interview questions will be submitted to you and it might demand your responses for revision. This conversation will be recorded by a tape recorder, and notes will be taken. If necessary, a follow up call may be made which will allow me to check for the accuracy of my notes and to ask any follow up questions I had after reviewing the transcripts of our first meeting.

The criteria to participate in this study are as follows:

Students with learning disability, graduate or undergraduate student, e, receive support service from the disability center and may have additional disability or disorder such as attention deficit and hyperactivity.

Staff member of the disability services center.

Participation in this study is completely voluntary and there is no penalty for not participating or for withdrawing from the study. If you agree to participate in this study, your identity will be kept strictly confidential. Your name and university will not appear in the study. Your stories will be referenced by a pseudo name. All transcripts will be kept on a locked-computer in a secured office in the researcher's home.

If you are interested in learning more about participating, please contact me by replying by email [nahedmohammed.binbakhit@wmich.edu](mailto:nahedmohammed.binbakhit@wmich.edu). Or you may feel free to contact me by phone at (0500000000).

Thank you for your cooperation of this request which is helpful for this study. Your response to this email will be appreciated. You can call me or email a contact number, time, date for me to contact you.

Sincerely,  
Nahed Binbakhit



**Appendix I**  
**Requesting Participation Letter (Arabic)**

## Requesting Participation Letter (Arabic)

### خطاب طلب للمشاركة في الدراسة

عزيزي/عزيزتي الطالب/ة، الموظف/ة  
اسمي ناهد بن بخيت مرشحة للحصول على درجة الدكتوراه في قسم التربية الخاصة، جامعة غرب ميشيغان في الولايات المتحدة. اعمل حالياً مع المشرقة د. إليزابيث ويتن، هذا الخطاب لدعوتك للمشاركة في هذه الدراسة لنيل درجة الدكتوراه. اكتب إليكم هذا الخطاب لطلب مساعدتكم لترشيح اسماء طلاب/طالبات ذوي صعوبات تعلم، وموظفين/موظفات يعملون في مركز الخدمات المساندة الذين قد يكونون مهتمين في المشاركة في الدراسة الحالية.  
**عنوان الدراسة:** "دراسة نوعية تبحث في خدمات ما بعد المرحلة الثانوية للطلاب/طالبات ذوي صعوبات التعلم في الجامعات السعودية. الغرض من هذه الدراسة هو اكتشاف التحديات والعقبات التي تواجه الطلاب ذوي صعوبات التعلم قبل واثناء الالتحاق بالتعليم بعد المرحلة الثانوية. بالإضافة إلى ذلك، ستلقي الدراسة نظرة عن كثب على الاستراتيجيات والمهارات التي يطبقها الطلاب والموظفون للتغلب على هذه التحديات، وكيف يصفون الخدمات الإضافية أو الدعم الذي من شأنه تحسين الخدمات المقدمة ومساعدتهم على النجاح في مسيرتهم التعليمية.  
**المشاركة في هذه الدراسة سوف تشمل:**

مقابلة شخصية فردية تستمر حوالي 45-60 دقيقة وسيتم إجراؤها في الوقت المناسب للمشاركين وفيها ستكون مقابلة وجهاً لوجه. قبل بدء هذه المقابلة، سيتم تقديم أسئلة المقابلة للمشاركين للاطلاع عليها وقد تتطلب إجاباتكم للمراجعة. سيتم تسجيل هذه المحادثة صوتياً، وسيتم أخذ الملاحظات، وقد يتم إجراء مكالمات لاحقة تسمح لي بالتحقق من دقة الملاحظات وطرح أي أسئلة متعلقة بالمقابلة إذا لزم الأمر.

#### معايير المشاركة في الدراسة

- 1- طلاب/طالبات ذوي صعوبات تعلم في المرحلة الجامعية أو مرحلة الدراسات العليا، يتلقون خدمات من مركز الخدمات المساندة وقد يكون لديهم إعاقة أو اضطراب مثل نقص الانتباه وفرط الحركة.
  - 2- موظفين/موظفات في مركز الخدمات المساندة
- المشاركة في هذه الدراسة تطوعية تماماً ولا توجد عقوبة لعدم المشاركة أو الانسحاب من الدراسة. إذا وافقت على المشاركة في هذه الدراسة، سيتم الحفاظ على سرية المعلومات (هويتك، اسمك والجامعة) لن تظهر أو تنشر في الدراسة. سيتم الاحتفاظ بكافة الإجابات في جهاز كمبيوتر الباحث في ملف سري ومغلق. الراغبين بالمشاركة سوف ترفق لهم نسخة من خطاب طلب المشاركة.

إذا كنت مهتماً بمعرفة المزيد عن المشاركة، يرجى الاتصال بي عن طريق البريد الإلكتروني الباحث الرئيسي: ناهد محد بن بخيت

[nahedmohammed.binbakhit@wmich.edu](mailto:nahedmohammed.binbakhit@wmich.edu)

أو في الاتصال عن طريق الهاتف على (00000000050).

اسم المشرقة على البحث: د. إليزابيث ويتن

[elizabeth.whitten@wmich.edu](mailto:elizabeth.whitten@wmich.edu)

نشكرك على تعاونك للمشاركة في هذه الدراسة. أقدر ردكم على هذا البريد الإلكتروني وتفاعلكم مع طلبي.

مع التحية....  
ناهد بن بخيت

## **Appendix J**

### **Informed Consent Form for Participants (English)**

## **Informed Consent Form for Participants (English)**

### **Western Michigan University Department of Special Education and Literacy Study**

**Principal Investigator:** Dr. Elizabeth Whitten, Ph.D.

**Student Investigator:** Nahed Binbakhit

**Title of Study:** A Qualitative study investigating post-secondary services for students with learning disabilities at Saudi universities

You have been invited to participate in a research project titled *A Qualitative study investigating post-secondary services for students with learning disabilities at Saudi universities*. This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

#### **What are we trying to find out in this study?**

The purpose of this qualitative phenomenological study is to explore the challenges and the obstacles that confront the students with learning disabilities before enrolling in/and during post-secondary education. In addition, the study will give a closer look at the strategies and skills that students and staff apply to overcome these challenges, and how do they describe the additional services or support that would improve the services provided and assist them to success.

#### **Who can participate in this study?**

You are allowed to participate in this study if you are a student who have a learning disability, or have multiple disabilities such as attention deficit and hyperactivity, graduate or undergraduate student, and receive services from the support services center. staff member of the disability center who work with the students with learning disabilities.

A student without learning disability, or who did not receive service from the disability center, will be excluded from the participation in this study. A staff member who does not work at the disability center will be excluded from the study.

#### **Where will this study take place?**

The interview for this study will take place in quiet and private place. Conference room at the university or meeting room at the library can be appropriate. You have the choice to select different location.

#### **What is the time commitment for participating in this study?**

The interview will take 45-60 minutes it will be an in-depth interview. You will be given three question for you to get preparation before the interview. The interview will be audio recorded for

insurance of the collecting data, and the transcript of the interview will be done after recording. You are able to review the transcript, and add any clarification or ask any question.

**What will you be asked to do if you choose to participate in this study?**

If you choose to participate in this study, you will be asked to participate in 45-60 minutes in an in-depth interview. You will have and an open-ended question that related to you experience at the university. The interview will be audiotaped and then transcribed.

**What information is being measured during the study?**

The concentration of the interview with you is to conduct a conversation about your personal experience as a student with LD at the university. The information will not include your name or your identity. Your transpired experience will be used to compare with other students' experiences to find common themes.

**What are the risks of participating in this study and how will these risks be minimized?**

All the audio transcripts will be destroyed once the transcription has been done. If you do not feel comfortable, or if have sensitive information that you do not want to share, or do not want to continue, you can stop participation in the study. There are no other known risks for your participation in this study.

**What are the benefits of participating in this study?**

The findings from this study will offer a chance to the students with LD to identify their needs and strengths while seeking the support and the services at the universities. Additionally, the universities may benefit from the findings to address the successful strategies that support students with LD to deal with their issues during their study. The findings may offer awareness of the importance of these services. It may assist Saudi Special Education Department in higher education in a better understanding of providing an adequate service for students with LD.

**Are there any costs associated with participating in this study?**

There will be no financial cost for participating in this study.

**Is there any compensation for participating in this study?**

There will be no compensation for participating in this study.

**Who will have access to the information collected during this study?**

The principal investigator and the student investigator will be the two persons who have access to the information in this study. The audio record will be saved in locked file in the searcher's computer, then it will be destroyed after transcribed.

**What if you want to stop participating in this study?**

*You can choose to stop participating in the study at anytime for any reason. You will not suffer any prejudice or penalty by your decision to stop your participation. You will experience NO consequences either academically or personally if you choose to withdraw from this study. The investigator can also decide to stop your participation in the study without your consent. Should you have any questions prior to or during the study, you can contact me at (0500000000) or via email [nahedmohammed.binbakhit@wmich.edu](mailto:nahedmohammed.binbakhit@wmich.edu). Or you can contact the primary*

investigator, Dr. Elizabeth Whitten at 269-387-5940 or via email [elizabeth.whitten@wmich.edu](mailto:elizabeth.whitten@wmich.edu). You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study. This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

-----  
I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

Please Print Your Name

\_\_\_\_\_  
Participant's signature

\_\_\_\_\_  
Date

**Appendix K**

**Informed Consent Form for Participants (Arabic**

## Informed Consent Form for Participants (Arabic)

### Western Michigan University Department of Special Education and Literacy Studies

جامعة غرب ميشيغان، الولايات المتحدة الأمريكية  
قسم التربية الخاصة  
نموذج طلب موافقة على المشاركة في الدراسة طالبات/ موظفات.

#### عنوان الدراسة:

دراسة نوعية تبحث في خدمات ما بعد المرحلة الثانوية للطلاب/طالبات ذوي صعوبات التعلم في الجامعات السعودية  
**Title of Study:** A Qualitative study investigating post-secondary services for students with learning disabilities at Saudi universities

اسم الباحث الرئيسي: : ناهد محمد بن بخيت

**Student Investigator:** Nahed Mohammed Binbakhit

اسم المشرف على البحث: د. إليزابيث ويتن

**Principal Investigator:** Dr. Elizabeth Whitten

#### لقد تمت دعوتك للمشاركة في مشروع بحثي بعنوان:

دراسة نوعية تحقق في خدمات ما بعد المرحلة الثانوية للطلاب/الطالبات ذوي صعوبات التعلم في الجامعات السعودية. يشرح طلب الموافقة هذا الغرض من هذا المشروع البحثي ويتناول جميع الالتزامات الزمنية والإجراءات المستخدمة في الدراسة والمخاطر والفوائد المترتبة على المشاركة في هذا المشروع البحثي. يرجى قراءة نموذج الموافقة هذا بدقة وبشكل كامل ويرجى طرح أي أسئلة إذا كنت بحاجة إلى مزيد من التوضيح.

#### ما الذي نحاول اكتشافه في هذه الدراسة؟

الغرض من هذه الدراسة النوعية هو اكتشاف التحديات والعقبات التي تواجه الطلاب ذوي صعوبات التعلم قبل واثناء الالتحاق بالتعليم بعد المرحلة الثانوية. بالإضافة إلى ذلك، ستلقي الدراسة نظرة عن كثب على الاستراتيجيات والمهارات التي يطبقها الطلاب والموظفون للتغلب على هذه التحديات، وكيف يصفون الخدمات الإضافية أو الدعم الذي من شأنه تحسين الخدمات المقدمة ومساعدتهم على النجاح في مسيرتهم التعليمية.

#### من يمكنه المشاركة في هذه الدراسة؟

يُسمح لك بالمشاركة في هذه الدراسة إذا كنت طالباً لديك صعوبة من صعوبات التعلم، أو لديك إعاقات متعددة مثل صعوبة تعلم بالإضافة إلى نقص الانتباه وفرط النشاط، طالب/ة جامعي أو طالب/ة دراسات عليا، وتتلقى الخدمات من مركز الخدمات المساندة.

إذا كنت أحد الأعضاء العاملين بمركز الخدمات المساندة.

سيتم استبعاد الطالب/الطالبة ليس لديه/ لديها صعوبات تعلم، لم يتلق خدمات من مركز الإعاقة من المشاركة في هذه الدراسة أو أحد الأعضاء غير العاملين بمركز الخدمات المساندة

#### أين ستجري هذه الدراسة؟

سوف تجرى المقابلة لهذه الدراسة في مكان هادئ وخاص ومناسب. يمكن أن تكون غرفة الاجتماعات في الجامعة أو غرفة الاجتماعات في المكتبة مناسبة. لديك الخيار لتحديد موقع اخر ملائم لك.

#### ما هو وقت الالتزام بالمشاركة في هذه الدراسة؟

ستستغرق المقابلة 45-60 دقيقة وستكون مقابلة متعمقة. ستحصل على ثلاثة أسئلة لكي تحصل على التحضير قبل المقابلة. سيتم تسجيل المقابلة الصوتية، وسيتم عمل نسخة من المقابلة بعد التسجيل. يمكنك مراجعة النص، وإضافة أي توضيح أو طرح أي سؤال.

ماذا سيطلب منك القيام به إذا اخترت المشاركة في هذه الدراسة؟



إذا اخترت المشاركة في هذه الدراسة، سيطلب منك المشاركة في 45-60 دقيقة في مقابلة متعمقة. سيكون لديك أسئلة مفتوحة متعلقة بتجربتك في الجامعة وسيتم تسجيل المقابلة ثم نسخها.

**ما هي المعلومات التي يتم قياسها خلال الدراسة؟**

سيتم التركيز في المقابلة على إجراء محادثة معك حول تجربتك الشخصية كطالب/ة لديه/ها صعوبات تعلم في الجامعة. لن تتضمن المعلومات اسمك أو هويتك. سيتم استخدام تجربتك الشخصية للمقارنة مع تجارب الطلاب الآخرين للحصول على موضوعات مشتركة.

**ما هي مخاطر المشاركة في هذه الدراسة وكيف سيتم تقليل هذه المخاطر إلى الحد الأدنى؟**

لا توجد مخاطر معروفة لمشاركتك في هذه الدراسة ؛ سيتم إتلاف جميع ملفات الصوت بمجرد إجراء النسخ. إذا كنت لا تشعر بالراحة، أو إذا كانت لديك معلومات حساسة لا ترغب في مشاركتها، أو لا ترغب في الاستمرار، يمكنك إيقاف المشاركة في الدراسة

**ما هي فوائد المشاركة في هذه الدراسة؟**

لا توجد فوائد مباشرة لك للمشاركة في هذه الدراسة

قد توفر نتائج هذه الدراسة فرصة للطلاب الذين يعانون من صعوبات التعلم لتحديد احتياجاتهم ونقاط القوة الخاصة بهم أثناء دراستهم الجامعية خلال بحثهم عن خدمات الدعم في الجامعة. بالإضافة إلى ذلك، قد تستفيد الجامعات من النتائج في تحديد الاستراتيجيات الناجحة التي يطبقها الطلاب والأعضاء العاملين بالمركز لتخطي العقبات التي يواجهها الطلبة. وقد توفر النتائج إدراكًا أعمق لأهمية تقديم هذه الخدمات للطلاب ذوي صعوبات التعلم، ويمكن أن تساعد النتائج إدارة التربية الخاصة في التعليم العالي في فهم أفضل لتوفير الخدمة المناسبة لهم.

**هل هناك أي تكاليف مرتبطة بالمشاركة في هذه الدراسة؟**

لن تكون هناك تكاليف مالية للمشاركة.

**هل هناك أي تعويض عن المشاركة في هذه الدراسة؟**

لا يوجد تعويض عن المشاركة في هذه الدراسة.

**من سيكون لديه حق الوصول إلى المعلومات التي تم جمعها خلال هذه الدراسة؟**

سيكون الباحث الرئيسي والمشرّف على البحث هما الشخصان اللذان يحصلان على المعلومات في هذه الدراسة. سيتم حفظ السجل الصوتي في ملف مغلق في كمبيوتر الباحث، ثم يتم إتلافه بعد نسخه.

**ماذا لو كنت تريد التوقف عن المشاركة في هذه الدراسة؟**

يمكنك التوقف عن المشاركة في الدراسة في أي وقت ولأي سبب كان. لن تعاني من أي إحباط أو عقوبة بقرارك لوقف مشاركتك. لن تواجه أي عواقب سواء أكاديميًا أو شخصيًا إذا اخترت الانسحاب من هذه الدراسة. يمكن للمحقق أيضًا أن يقرر إيقاف مشاركتك في الدراسة دون موافقتك.

إذا كان لديك أي أسئلة قبل أو أثناء الدراسة ، يمكنك الاتصال بي على (505.000.000) أو عبر البريد الإلكتروني

أو يمكنك الاتصال بمشرّف الباحث الدكتورة إليزابيث ويتن على [nahedmohammed.binbakhit@wmich.edu](mailto:nahedmohammed.binbakhit@wmich.edu).

يمكنك أيضًا الاتصال برئيس [elizabeth.whitten@wmich.edu](mailto:elizabeth.whitten@wmich.edu) الرقم 5940-387-269 أو عبر البريد الإلكتروني

، مجلس المراجعة المؤسسية للمواد البشرية على الرقم 8293-387-269 أو نائب الرئيس للبحوث على الرقم

8298-387-269

تمت الموافقة على وثيقة الموافقة هذه لمدة سنة واحدة من قبل مجلس المراجعة للموضوعات البشرية تحت إشراف جامعه غرب ميشغن الأمريكية. كما هو مبين في التاريخ المختوم والتوقيع لرئيس المجلس في الزاوية اليمنى العليا. لا تشارك في هذه الدراسة إذا كان التاريخ المختوم أقدم من سنة واحدة.

**موافقة أو توقيع المشارك في البحث:**

لقد قرأت نموذج الموافقة المسبقة وتم شرح المخاطر والفوائد لي. أوافق على المشاركة في هذه الدراسة.

الاسم: \_\_\_\_\_ التوقيع: \_\_\_\_\_ التاريخ: \_\_\_\_\_