



University
of Exeter

**Exploring Facilitators and Barriers Toward the Provision of
Reasonable Adjustments to Students with Learning
Disabilities at Saudi Public Universities**

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to the University of Exeter as a thesis for the degree of
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Abstract

Where inclusion is still at an early stage (Alqahtani, 2021), little is known about how students with learning disabilities are supported and included in Saudi public universities. This study using a sequential mixed methods design and Bronfenbrenner's Ecological Systems Theory, sought to investigate the provision of reasonable adjustments to students with learning disabilities in Saudi public universities and identify facilitators and barriers to implementation. The study involved two phases of data collection, both numerical and narrative. In phase one, 178 faculty members and 44 disability centres/unit staff completed two online questionnaires. Phase two involved 20 qualitative online interviews (eight faculty members, seven staff members at disability centres/units, and five identified and registered students with learning disabilities). The data analysis and theoretical framework showed that although some adjustments related to teaching, learning, and assessments were available in some Saudi public universities, this availability was challenged by different factors related to faculty members, staff members, disability centres/units, policy, Saudi public universities and Saudi societal beliefs. The study found at the first level of the Ecological Systems that some Saudi public universities (as the immediate learning environment of students with learning disabilities) did not recognise this disability group making it difficult for students with learning disabilities to access support in their universities. Also, at this level, it has been found that there was a poor relationship between faculty, staff, and their universities, as well as a lack of understanding of the concept of reasonable adjustments. In addition, the study discovered that limited resources at the Exo-system and Macro-system hampered the provision of reasonable adjustments and

denied students with learning disabilities access to these services at Saudi public universities. For example, resources and capacity at Saudi public universities (the Exo-system) e.g., disability centres/units, staff, expert staff in learning disabilities, training, funds and policy were inadequate. Also, the Saudi Ministry of Education's capacity and resources (the Macro-system) in terms of higher education policy, diagnosis and transition plans were limited resulting in difficulties in implementing reasonable adjustments and access of students with learning disabilities to this provision at Saudi public universities. Nevertheless, the study found that the broader sociocultural beliefs at the Macro-system often influenced understandings of learning disabilities (e.g., ideas about 'normality') and the concept of reasonable adjustments (often seen as being about 'sympathy'), the availability of the provision of reasonable adjustments, the recognition/identification of learning disabilities, and the establishment of disability centres/units in Saudi higher education. This result had important implications and recommendations for various stockholders, including policymakers, Saudi public universities, the Ministry of Education, students with learning disabilities, and Saudi society. For example, policymakers must ensure that there is a reasonable adjustment policy in place to guide the implementation. Saudi public universities and the Ministry of Education would increase their capacity and resources to improve implementation and access for students with learning disabilities to reasonable adjustments. Saudi society must also reconsider people with disabilities as capable learners deserving equal opportunities rather than sympathy. Taking these implications and recommendations into account would improve the availability and accessibility of the provision of reasonable adjustments at Saudi public universities.

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Chapter One: Introduction to the Study

1.1 Introduction

Despite the significant increase in the number of admitted students with learning disabilities into higher education (e.g., with dyslexia), providing those students with equitable educational opportunities remains a challenge; for example, in terms of what is the best way to support those students (e.g., see Los Santos et al., 2019; Moriña, 2022; Moriña & Biagiotti, 2022). Based on previous studies (e.g., Cortiella and Horowitz, 2014; Hong, 2015) students with learning disabilities (which are known as specific learning difficulties in the United Kingdom UK, see Section 2.1.3) often face difficulties in phonological processing, word recognition and decoding, shaping letters, and organizing thoughts which might limit their access to the curriculum and assignments. These skills are fundamental for reading and writing which are necessary to access the curriculum and preparing assignments (Cortiella and Horowitz, 2014). Therefore, when students with learning disabilities are provided with the same teaching and learning methods as other students (non-disabled students) with no consideration for their unique characteristics, they can be at a disadvantage and may experience unequal education opportunities compared to their peers with no disability (Weis et al., 2016).

This emphasises the need for considering the needs of students with learning disabilities in higher education (Bunbury, 2020). One way universities (e.g., in the UK, United States of America USA, and Saudi Arabia) aim to provide students with learning disabilities with equitable learning opportunities is through the provision of reasonable adjustments (e.g., see Equality Act, 2010 in the UK, section 504 of the

Rehabilitation Act of 1973 in the USA, and Disability Code 2000 in Saudi Arabia). This approach, as discussed in the next chapter, focuses on providing students with learning disabilities with different ways to access and demonstrate knowledge, such as lecture notes before the beginning of the lecture or giving an oral presentation instead of written assignments etc. Several studies stressed that providing students with learning disabilities with reasonable adjustments that enable them to access the curriculum and assessments can improve assignments (McGregor et al., 2016), and average grades (Trammell, 2003; Lightner et al., 2012), and in many cases help them achieve in higher education (Couzens et al., 2015).

However, despite the usefulness of this approach, there are several barriers to its implementation (Little & Gimblett, 2023). One is that as the concept of reasonable adjustments is a policy term in its nature (which universities are required to meet), it can be interpreted in different ways by different institutions (Los Santos et al., 2019). For example, some of the recent studies on the topic recommended further research to clarify this concept (Walker, 2017), especially in terms of what could be seen as 'reasonable' or as 'adjustments' (Kendall, 2018) as explained in the next chapter. Other studies have also found a lack of knowledge (Sandoval et al., 2021) and training among faculty members regarding how to meet the needs of students with learning disabilities through this approach (Ryder & Norwich, 2019; Little & Gimblett, 2023). This emphasises the need for further research regarding the provision of reasonable adjustments to this group of students (Moriña, 2022).

Furthermore, in Saudi Arabia, where the inclusion of students with disabilities is at its early stages (Alqahtani, 2021), the lack of knowledge regarding students with learning disabilities and how to support them in higher education is more

pronounced. In contrast to the UK and the USA, the number of students with learning disabilities in Saudi higher education remains unknown (Binbakhit, 2020). Moreover, different studies confirmed that students with learning disabilities were a neglected disability group in Saudi higher education (Binbakhit 2020) and many of those students are overlooked in the provision of reasonable adjustments at their universities (Abed and Shackelford, 2020). As a result, despite the general lack of research on this topic in Saudi Arabia, most of the small studies conducted on this topic pointed out that the provision of reasonable or educational academic support to students with learning disabilities in Saudi universities was limited (Abed & Shackelford, 2020; Hariri 2020). However, to date, no study has explored why the provision of reasonable adjustments is limited for this group of students. Also, no study explored in-depth barriers and facilitators to the provision of reasonable adjustments in Saudi public universities (e.g., see Alwabli 2017; Arafah & Mohammed, 2015; Binbakhit 2020; Bakri, 2019). Therefore, exploring how reasonable adjustments are understood as a concept, assessing their availability, and considering facilitators and barriers to its provision from the perspectives of students, faculty and staff members could be valuable.

1.2 Developing Interest in the Research Problem

During my master's studies in special education in the USA, I had a classmate who had dyslexia. This student once told me about certain types of adjustments the university made for him (e.g., different assignment formats) and how these were helpful in their studies. After finishing my program, I went back to Saudi Arabia to work as a lecturer at the Department of Special Education at Jazan University (a Saudi public university). I began to discuss this issue with my colleagues and other

academics who were interested in the same topic. However, each time I began discussing the topic, I faced two big questions; one was whether students with learning disabilities existed in Saudi higher education (assuming those students could only be found in schools). Second, how could we know if those students existed (e.g., identify them)? Those two questions were a milestone in any conversation about students with learning disabilities, so this led me to read through Saudi's disability policies and literature to understand how students with learning disabilities were identified, included and supported in Saudi higher education.

Through initial reading of the Saudi disability policies, I found that the Saudi Ministry of Education, through its disability policy, officially recognised the existence of students with learning disabilities and provided statistical data about their number; but only in compulsory schooling (see Chapter Two, Table 2.1). For example, based on the available data, there were 26,225 students with learning disabilities which represented nearly 40% of all students with disabilities in Saudi schools (Battal, 2016). Also, under the Saudi Rules and Regulation of Special Education Programs (RRSEP), the Saudi Ministry of Education defined the type of services that should be provided to students with learning disabilities throughout their studies in general education (Aldabas, 2015). However, this was not the case in higher education (which was operated under another Ministry of Education until recently (as explained subsequently). For example, there was no data about the number of students with learning disabilities (Binbakhit, 2020) or policy that officially recognised their existence in this education sector (Bakri, 2019). From this point, I started wondering more about the inclusion of students with learning disabilities and did an intensive

search in the Saudi literature to find out more about this group of students (see Chapter 2, Table 2.2).

From this process, I realised that there was also a lot of missing information on the education of students with learning disabilities in Saudi universities when it came to official statistics. Moreover, there was a significant need for research regarding students with learning disabilities in Saudi higher education, especially concerning the provision of reasonable adjustments, (Alharthi, 2013; Al-Wabili, 2001; Thuwaibi, 2009) which could be connected to their academic success as explained earlier. In addition, internationally the topic of reasonable adjustments for students with learning disabilities was still under-researched e.g., in the UK (Little & Gimblett, 2023) and in Spain (Sandoval et al., 2021). Hence, the above reasons motivated me to do my PhD studies on the topic of the inclusion of students with learning disabilities in higher education in Saudi public universities. This is not only to bridge gaps in the wider and Saudi literature (which is an important reason for conducting education research) but also to enhance individuals' lives through improved institutional practices. Therefore, I hope that the results of this study can improve the educational opportunities and availability of the provision of reasonable adjustments to students with learning disabilities in Saudi public universities.

1.3 Problem Statement

As mentioned above from a wider perspective, there is a need to explore and clarify the concept of reasonable adjustments (Walker, 2017; Los Santos et al., 2019), investigate and remove obstacles to their implementation (McGregor, et al., 2016) and promote effective ways to deliver reasonable adjustments to students with

learning disabilities (Ryder & Norwich, 2019). From a Saudi perspective, the need is greater. For example, researchers are urging for an examination of faculty attitudes, knowledge of learning disabilities (Alalyani, 2021) and reasonable adjustments (Bakri, 2019). Moreover, studies are needed to explore policies supporting students with learning disabilities (Binbakhit, 2020) and the availability of the provision of reasonable adjustments (Bakri, 2019) as well as facilitators and barriers to this provision. Therefore, based on the gap in wider and Saudi literature, this study examined the concept of the provision of reasonable adjustments and the availability of this provision, as well as facilitators and barriers to its implementation from the perspective of students with learning disabilities, faculty members and staff members at disability centres/units at Saudi public universities.

1.4 The Context of the Study: Saudi Arabia

1.4.1 The Education System

The Kingdom of Saudi Arabia is a large developing country in the southwestern region of Asia occupying about 80% of the Arabian Peninsula with an area of 865.000 square miles. The country is divided into five different geographical regions: north, south, east, west, and middle/central. The country is also boarded with different countries such as Qatar and the United Arab Emirates to the east, Kuwait, Jordan, and Iraq to the north, and by Yemen and Oman to the south. In terms of population, the last national statistics data found that the population of Saudi Arabia in 2018 was over 30 million (General Authority for Statistics, 2018). Saudi citizens represented nearly 21 million of the population (General Authority for Statistics, 2018) and 1.5 million of them reported having a disability (Disability Survey, 2017).

Formal education began in the country after the establishment of the Kingdom in 1932, however, it was only available to male students, and there were not any schools offering education for females (Alamri, 2011). This does not illustrate a system of segregation in Saudi society, rather, Saudi society considered preparing females for marriage and family life as more important than education. However, the idea of offering education for females began in 1960 when the first school for girls in Riyadh was opened (Al Rawaf, & Simmons, 1991). Then, the development of education continued, and the number of schools increased rapidly after 1953 to more than 23,000 schools in 2018, including more than 5 million male and female students in all general education levels. This included a 6-year elementary school, a 3-year secondary school, and a 3-year high school.

1.4.2 Learning Disabilities in General Education

The formal special education services in Saudi Arabia began in 1960 after the establishment of the Ministry of Education in 1954 (Alamri, 2011). Initially, the education for students with disabilities was limited to three disability groups; students with visual disabilities, hearing disabilities and intellectual disabilities. These were taught in separate schools or self-contained classrooms (Battal, 2016). Later, in 1995, the Ministry of Education started “mainstream schooling” which meant “educating children with special educational needs in regular education schools and providing them with special education services” (Ministry of Education, 2002, p.8). Under mainstream schooling, more disability groups who were already in schools were officially included in special education services. These included students with learning disabilities, physical disabilities, behavioural and emotional disturbances, communication problems, visual and hearing impairments, and gifted students

(Battal, 2016). However, the first three disability groups were still placed in separate schools and self-contained classrooms (Battal, 2016).

To further develop and regulate special education services, the Saudi government introduced the Disability Code 2000 (King Salman Center for Disability Research, 2000). The code consists of 16 articles which state the rights of people with disabilities including e.g., rights in education, healthcare, work etc. For example, in the educational sector, the second Article of this policy emphasised meeting the educational needs of students with disabilities at all stages of education i.e., from preschool to higher education (King Salman Center for Disability Research, 2000). Following the Disability Code 2000, in 2001 the General Saudi Ministry of Education published Regulations of Special Education Programmes and Institutes (RSEPI) (Alquraini, 2013, 2014).

RSEPI is an educational policy for disabled students from age 6 to 18 years. Under this policy, students with learning disabilities should be provided with a free and appropriate education in the least restrictive environment considering their Individualised Education Plan (IEP or Individual Learning Plan ILP as named in the UK) (Poch et al., 2023). To access special education services, students with learning disabilities need firstly to be identified by a special education teacher as having a learning disability; and to be diagnosed as having a learning disability. These students must have a clear gap between their learning skills and academic achievement compared to their peers, which is known as a discrepancy model as discussed in the next chapter (Poch et al., 2023). The students labelled with learning disabilities were still placed in the same classroom as their peers e.g., non-disabled but getting some support from special education teachers in what was called a

“resources room” for some time of the school day. This practice was known as “pull out” or “withdrawal” support (Hussain, 2009).

1.4.3 Learning Disabilities in Higher Education

Higher education was operated as a small department under the Ministry of Education until 1957 when it became a separate ministry named the Ministry of Higher Education (Alamri, 2011). This Ministry was responsible for establishing universities, administrating them, establishing policy, and authorising these universities to open programs following the country’s needs. Under this Ministry, the number of Saudi public universities increased within 50 years to 29 public universities in 2000. Also, this Ministry in 1994 published “The Council of Higher Education and Universities and its Regulations”, including 60 articles (Council of Universities’ Affairs, 2021). However, none of these articles explicitly addressed disabilities or the education of students with disabilities, despite the number of disabled students in 2017 being 175,391 according to the Saudi General Authority (General Authority for Statistics, 2017).

Recently, under the Saudi Vision 2030, the new government decided to again merge the two ministries into one Ministry of Education, which is responsible for education in Saudi Arabia from preschool to higher education. However, the Council of Higher Education and Universities and its Regulations remained the same and RSEPI as an educational disability policy is still limited to general education e.g., 6 to 18. However, despite the absence of a specific disability policy in Saudi higher education (Hariri (2020), it's important to note that public universities in Saudi Arabia are still obligated to accommodate the needs of their disabled students. For example,

reflecting on the Disability Code 2000, the second Article stated that educational institutions, including universities, are required to address the educational needs of students with disabilities at all levels of education. This raised the question as to how Saudi universities would deal with the educational needs of students with disabilities, especially, those with learning disabilities.

In response to government policy (e.g., Disability Code 2000), Saudi public universities began establishing "disability centres/units" to support students with disabilities, including those with learning disabilities (Authority of People with Disability, 2022). However, at the beginning of this study (e.g., September 2019), there was a lack of statistical data about the number of disability centres/units at Saudi public universities, as well as written and published disability policies by Saudi public universities that explain the disability groups and services. At that time, only one Saudi public university (King Saud University) had a written and published disability policy in 2013, which outlined eleven disability groups, including learning disabilities, and provided information about reasonable adjustments, the role of disability centres/units, and the rights of students with learning disabilities to access services while maintaining the confidentiality of their information (King Saud University, 2018). Therefore, due to the absence of relevant disability policies in higher education supporting students with learning disabilities, this study followed King Saud University's disability policy for its research.

1.4.4 The Saudi Vision 2030

One cannot explain the context of the study without considering Saudi Vision 2030 which states education as one of its goals. For example, under this vision

ministries of education not only merged into one Ministry of Education, but universities also became required to have their own independent systems and resources Bureau of Experts (Council of Ministers, 2023). This was a major shift in education which aimed to make the higher education system a more sustainable sector by requiring universities to become more self-sufficient in their governance and finances (Bureau of Experts at the Council of Ministers, 2023). This may raise the question of what kind of role inclusion in education will play at this moment of change. Therefore, it is interesting to conduct the study at this time in Saudi Arabia, which can beneficially help capture some of those changes in the country.

1.5 Research Purpose and Aims

This study explored facilitators and barriers toward the provision of reasonable adjustments to students with learning disabilities in Saudi public universities as shown in the next Table.

Table 1. 1: Presents the study’s questions and aims.

Research Aims	Research Questions
Exploring the provision of reasonable adjustments to students with learning disabilities at Saudi public universities.	1. How do students with learning disabilities, faculty and staff members at disability centres/units describe the provision of reasonable adjustments at Saudi public universities?
Exploring faculty and staff members at disability centres/units’ understanding of the terms learning disabilities and reasonable adjustments.	2. How do faculty and staff members at disability centres/units understand the terms learning disabilities and reasonable adjustments in Saudi public universities?
Exploring faculty members’ interest toward the provision of reasonable adjustments to students with learning disabilities at Saudi public universities.	3. To what extent and in what ways are faculty members interested in the provision of reasonable adjustments to students with learning disabilities in Saudi public universities?
Exploring the capacity and availabilities of resources at Saudi public universities regarding the provision of reasonable adjustments.	4. How do faculty and staff members at disability centres/units describe the capacity and availability of resources regarding the provision of reasonable adjustments in Saudi public universities?

Table 1.1 Continued

Research Aims	Research Questions
Exploring the perspectives of students with learning disabilities, faculty members and disability unit and centre staff members about Saudi universities' policy regarding the provision of reasonable adjustments.	5. What are the perspectives of students with learning disabilities, faculty, and staff members at disability centres/units about reasonable adjustments policies at Saudi public universities?
Exploring the perspectives of students with learning disabilities, faculty members and disability unit and centre staff members about the facilitators and barriers toward the provision of reasonable adjustments	6. What are the facilitators and barriers that students with learning disabilities, faculty and staff members at disability centres/units recognise with regards to the provision of reasonable adjustment at Saudi public universities?
Contributing to the broader literature on exploring the provision of reasonable adjustments to students with learning disabilities from a global and local perspective.	RQs 1, 2, 3, 4, 5, 6

1.6 Definition of the used Terms in the Study

Learning Disabilities:

Disturbances in one or more of the basic psychological processes involved in understanding and using written or spoken language which manifests itself in disorders of listening, thinking, speaking, reading, writing (dictation, articulation, handwriting) and mathematics that are not attributable to mental, auditory, visual, or other types of disability, or learning or family care circumstance” (Saudi Ministry of Education, 2016, p.11).

Students with Learning Disabilities in this Study:

This definition has been adapted for this study as follows: students with learning disabilities are students who have a documented type of learning disability (e.g., dyslexia, dyscalculia, or dysgraphia) and benefit from the disability centres/units at their universities.

Reasonable Adjustments:

Reasonable adjustments are a kind of support that is provided to students with disabilities in higher education which may include adjustments to teaching, learning, and assessment methods to be accessible to all students (King Saud University, 2018).

Disability Centres and Units:

A kind of centre or unit that is responsible for providing support and reasonable adjustments to students with disabilities in universities (King Saud University, 2018).

Faculty Members:

Faculty members are individuals who are employed in higher educational institutions, with various academic ranks from lecturer to professor (Bakri, 2019).

Staff Members at Disability Centres and Units:

Staff members at disability centres/units are individuals who work in these centres/units and are responsible for collaboration with faculty members and students with disabilities to meet the needs of students with disabilities in higher education (King Saud University, 2018).

Barriers to Reasonable Adjustments:

Factors that inhibit the access to reasonable adjustments, or the provision of reasonable adjustments to students with learning disabilities in Saudi public universities.

Facilitators to Reasonable Adjustments:

Factors that support or promote the provision of reasonable adjustments to students with learning disabilities in Saudi public universities.

1.7 Organization of the Study

This study includes six chapters: Chapter One introduces the study problem, aims, research questions, significance, and context. Chapter Two includes two sections: section one presents and critically discusses the international and Saudi literature regarding the education of students with learning disabilities and the provision of reasonable adjustments to them. The second section presents the study's theoretical framework, along with a discussion of its relevance to the research problem, aims and questions. Chapter Three presents the study's philosophical assumptions, methodological approach, and methods of data collection and analysis. It also gives information regarding sampling techniques, approaches to access participants, and ethical considerations.

Chapter Four presents the quantitative findings under section one and qualitative findings under section two. Chapter Five integrates and discusses quantitative and qualitative findings in light of the wider literature under two sections; section one considers the research questions and section two the study's theoretical framework. Finally, Chapter Six presents the study's significance, contribution to theory, policy, and practice as well as its implications and recommendations.

1.8 Summary of the Chapter

This chapter introduced the study and provided details about its focus, aims, and context. The next chapter presents the study's literature and its theoretical background.

Chapter Two: Literature Review and Theoretical

Background

The previous chapter outlines the background of the research problem, its significance, aims and research questions, as well as the context of the study. The current chapter presents the literature review and theoretical framework for this research under two sections: Section One presents and critically discusses the inclusion of students with learning disabilities from both Saudi and global perspectives, the current status of knowledge, the used terms in the study as well as facilitators and barriers toward the provision of reasonable adjustments. Section Two presents the theoretical framework for this study, along with a discussion of its relevance to the research problem, aims and research questions.

2.1 Section One: The Literature Review

2.1.1 Introduction

This literature review begins by discussing in detail the inclusion of students with learning disabilities in higher education from a Saudi perspective as it is the context of the study. This analysis is embedded in the wider international scholarship on the subject, including theoretical ideas as well as practical implications for the education systems and students. This literature analysis provides an extensive review of the debates associated with learning disabilities, including the definition and identification of students with learning disabilities in the context of higher education. The extensive review of the relevant research explores the use of the terms learning disabilities and reasonable adjustments, along with the philosophical

and social underpinnings of such terms in different contexts, such as in Saudi Arabia, in the UK, and in the USA. This is because this study is focused on Saudi literature as its main context, but arguably it is important and instructional to consider the similarities and differences between different contexts.

2.1.2 The Inclusion of Students with Learning Disabilities into Higher Education

2.1.2.1 A Global Perspective

Globally, many countries around the world are working actively to promote the rights of disabled people in higher education as well as aiming to increase the number of admissions for disabled students (Khalifa & Nasser, 2016). This could be seen from different perspectives, for example, in different countries laws have been put in place to safeguard the rights of disabled students in higher education. In the UK, the Equality Act 2010 aims to prohibit discrimination against individuals with disabilities and defend the rights of those individuals in many aspects of life, including higher education (Equality Act, 2010). Similar laws that aim to avoid discrimination and promote the rights of disabled students in higher education exist in the USA (section 504 of the Rehabilitation Act, 1973) and Saudi Arabia (Disability Code, 2000) (U.S. Department of Education, 2021; King Salman Center for Disability Research, 2000). Statistically, the development of legislation has helped to increase the access of students with disabilities to higher education. For instance, the latest statistical data show 16 % in the UK and 21% in the USA of students in higher education programmes who have a type of disability (National Center for Education Statistics. 2023; Higher Education Student Statistics HESA 2023). More specifically, as estimated by the Higher Education Statistical Agency, students with dyslexia or

specific learning disability represented 5% of all students in higher education in the UK (Ryder & Norwich, 2019). Similarly, in the USA, one in twenty students with disabilities in higher education reported having a learning disability (National Centre for Learning Disabilities, 2019). Yet, ensuring access for students with disabilities to higher education is not the only issue, and there are still many issues that disabled students may face in higher education, especially those with learning disabilities, who represent most disabled students in higher education in the UK (e.g., Ryder & Norwich, 2019) and USA (e.g., Griful-Freixenet et al., 2017).

Recent research on the topic of the inclusion of students with 'learning disabilities' (as defined later see Section 2.1.3) focuses on academic support and academic success, as well as approaches to inclusive pedagogy related to the education of students with learning disabilities in higher education (e.g., see Couzens, et al., 2015; Collins, et al., 2019; Moriña & Biagiotti, 2021; Moriña 2022). This attention is not surprising since most challenges faced by students with learning disabilities are those related to academic support and success after enrollment to university (e.g., barriers to learning). This could be seen from the graduation rate and the number of those students who completed their programs successfully. In the USA and Spain, research (e.g., Cortiella & Horowitz, 2014; Summers et al., 2014) demonstrated that the graduation rate of students with learning disabilities is lower, and some of those students do not graduate on time (Jorgensen et al., 2007) or complete their programs successfully (Newman et al., 2011; Timmerman & Mulvihill, 2015). The poor academic performance of students with learning disabilities (Hong, 2015; Kendall, 2016) might be the result of the lack of academic support (Hong, 2015) and also due to specific students' difficulties, e.g., with phonological

processing, word recognition, organizing thoughts on paper, and keeping track of thoughts when writing (Cortiella & Horowitz, 2014) (see Section 2.1.6.2). Thus, the absence of appropriate academic support related to the academic needs of students with learning disabilities may lead some of those students to leave college (Cortiella & Horowitz, 2014), highlighting the concern about the current inclusive pedagogy that supports students with learning disabilities in higher education (Los Santos et al., 2019; Moriña & Biagiotti, 2021; Moriña, 2022).

In postsecondary education, there can be two main models which aim to provide students with disabilities with some sort of inclusive education. One is reasonable adjustments which are currently in use in Europe and North America, which often require a disability office on campus to arrange accommodations (see Section 2.1.6.1) for each student based on diagnosis and specific needs. The other is the universal design of learning model, which aims to create more inclusive environments for all learners and to design structures that consider all potential users' physical and sensory needs (Lipka et al., 2020). On the one hand, the universal design for learning is a framework which focuses on building an inclusive curriculum that is designed to accommodate a range of human diversity needs (Mcguire et al., 2006) with less use of individual accommodations (Sandoval et al., 2021). More specifically, the curriculum is designed around three principles (i.e., engagement, representation, and action and expression) that provide students with multiple means of expression, representation, and engagement in knowledge (CAST, 2018). For example, regarding engagement, the universal design for learning could provide students with different choices, such as working alone or in a group. Also, with regard to the way teaching materials are presented, students could

access the same information using a variety of methods e.g., through vision, hearing, or touch. The expression concept means allowing students to express their knowledge in different forms, for example, through written or oral presentations. On the other hand, reasonable adjustment is a model that focuses on how students access curriculum or assessments (Conderman & DeSpain, 2017) and the methods to demonstrate what they have learned in the best possible way. More specifically, a plan is designed based on each student's individual needs, for example, by extending the time for students on assignments and exams or giving individual students alternative assignment formats, e.g., oral presentation instead of a written assignment.

It seems that implementing a universal design for learning principles would to some extent limit the use of individualised adjustments (Sandoval et al., 2021), yet many institutions in higher education, including Saudi universities still mainly focus on reasonable adjustments (Black et al., 2015). This may be because the universal design for learning is still not well explored and because by law universities in countries such as the USA, the UK and Saudi Arabia are required to provide reasonable adjustments for their students with disabilities (e.g., see Equality Act, 2010 in the UK, section 504 of the Rehabilitation Act of 1973 in the USA, and Disability Code 2000 in Saudi Arabia). By implication, reasonable adjustments in these countries might be the main policy designed to give students with learning disabilities some access to higher education.

In the literature, reasonable adjustments are described as an approach that allows students with learning (and other) disabilities to have as far as possible equal access to educational opportunities (e.g., allowing access to the curriculum) and

supports the success of students with disabilities in higher education, especially those with a learning disability (Cortiella & Horowitz, 2014; Barazandeh, 2005; Timmerman & Mulvihill, 2015). A number of studies have indicated that the use of reasonable adjustments positively influenced the academic progress of students with learning disabilities (Los Santos et al., 2019), as well as helping them overcome academic problems, such as failing tests and achieving low grades (Lightner et al., 2012). Importantly, students with learning disabilities who sought support services earlier performed better academically than students who did not (Lightner et al., 2012) and reported fewer assignment difficulties compared to those without access to accommodations (McGregor et al., 2016). However, despite the legislation and the requirement for the provision of reasonable adjustments in higher education, this approach is still challenged. Most of these challenges are related to the concept of reasonable adjustments itself. While the term 'reasonable adjustments' is a policy term by its nature, which universities are required to meet (see Section 2.1.5.1), it is still however lacking clarity within higher education (Walker, 2017). More specifically, research still calls for clear guidance as to what can be considered as a 'reasonable adjustment' and what cannot be (Walker, 2017). It could be argued that more research regarding the concept of reasonable adjustments in higher education is urgently needed (Los Santos et al., 2019).

Furthermore, the provision of reasonable adjustments is still limited by the level of knowledge of learning disabilities and reasonable adjustments on the part of faculty members and university administrators. This might be explained by the fact that a learning disability is often a hidden or undiagnosed disability. Furthermore, there are still misconceptions about learning disabilities and the best ways to

implement and adjustments, especially for students with learning disabilities (Binbakhit 2020; Timmerman & Mulvihill, 2015). Research (e.g., in Saudi Arabia and the USA) has shown that faculty members still question whether students with learning disabilities have a disability or not (Bakri, 2019; Wolanin and Steele, 2004). As a result, some faculty members also question whether it is fair to provide such adjustments to students who seem to have no disability (Trimmis & Bessas, 2016; Zhang et al., 2010). Such misconceptions about learning disabilities might be a barrier to the provision of reasonable adjustments to students with learning disabilities. Furthermore, knowledge among faculty members on how to effectively accommodate the need of students with learning disabilities through reasonable adjustments is still restricted (Bakri, 2019; Ryder & Norwich, 2019; Sandoval et al., 2021). For example, research e.g., from the UK and Spain raises concerns that many faculty members are still not sure about the best ways of supporting students with additional needs through reasonable adjustments. Thus, the need for reasonable adjustments is still not very well understood among faculty members (Timmerman & Mulvihill, 2015). Therefore, authors have argued that higher education institutions must research the most effective methods of reaching out to their students and educating their faculty and staff to improve institutional processes for students with disabilities in higher education (Los Santos et al., 2019).

Research into learning disabilities (Moriña, 2022) and reasonable adjustments for those students is still limited in the context of higher education. For example, researchers have strongly advocated further in-depth research into two key areas of this important subject. Firstly, there is a need to support the success of students with disabilities (Los Santos et al., 2019), more specifically, determining factors related

to their academic success. Secondly, it is necessary to establish the most effective ways of support for these students to enable them to complete their studies successfully (Moriña & Biagiotti, 2021). Moreover, there is a need to explore the availability of support services/reasonable adjustments for students with disabilities (Sandoval et al., 2021; Moriña & Biagiotti, 2021), investigate the perspectives of faculty members and students with disabilities (e.g., with learning disabilities) toward the provision of reasonable adjustments (Timmerman & Mulvihill, 2015; Sandoval et al., 2021), and explore the obstacles that may prevent the receipt of accommodations (McGregor et al., 2016). Without such information, it can be difficult to have a complete picture of inclusive education and to support the requirements of students.

In summary, the inclusion of students with learning disabilities faces a lack of research focusing on those students and their needs for reasonable adjustments. Also, the provision of reasonable adjustments to those students is still challenged by misconceptions and a lack of knowledge of both learning disabilities and the provision of reasonable adjustments for this group of students. Thus, a further study on facilitators and barriers toward the provision of reasonable adjustments for students with learning disabilities would help to clarify the misconceptions about learning disabilities, add some clarity to the concept of reasonable adjustments, as well as helping in addressing some of the obstacles that may prevent the provision of reasonable adjustments. Moreover, such a study will contribute the broader knowledge on the inclusion of students with learning disabilities in higher education by exploring the perspectives of faculty members and students with learning disabilities regarding the current inclusive practices, as well as adding some

recommendations to the literature that may support the success of students with learning disabilities in higher education.

2.1.2.2 A Saudi Perspective

2.1.2.2.1 The Roots of the Issue

As the concept of inclusive education is relatively new in Saudi Arabia (Alquraini, 2013; Alqahtani, 2021), the inclusion of students with disabilities in Saudi Arabia is a more complex issue compared to other countries, e.g., the United Kingdom and the United States. First, “in the Saudi context, inclusive education is organised based on the type of disability and/or special education need” (Arishi, 2020, p.42). For example, within the Saudi organizational guide for special education, there are eleven disability categories: hearing impairment, visual impairment, mental disability, learning disabilities, multiple disabilities, autism disorder, behavioural and emotional disorder, physical and health disabilities, language, and speech disorders, deaf-blind, and attention deficit hyperactivity disorder (Ministry of Education, 2016). Students with learning disabilities represent most students with disabilities in Saudi schools. Battal (2016) pointed out that students with learning disabilities represented nearly 40% of all students with disabilities in Saudi schools, as summarised in Table 2.1.

Table 2. 1: The number of students with disabilities in Saudi public schools

Disability	No. of Institutes & Programs	No. of Students
Hearing impairment	586	6881
Visual impairment	363	3214
Intellectual disabilities	1101	20576
Autism	220	1464
Multiple disabilities	58	490
Learning disabilities	2393	26225
hyperactivity	30	81
Physical and health disabilities	90	4530
Grand Total	4796	63461

The source: adapted from Battal (2016)

Despite of students with learning disabilities representing most disabled students in the general education system in Saudi Arabia, there are still many disabled students who are not receiving educational support. According to the latest disability survey in Saudi Arabia, only 27% of students with disabilities aged 6 to 18 years receive some type of education (General Authority for Statistics, 2017). This points out that there are many students with learning disabilities who are still out of reach. This issue has been recently recognized by the Saudi Ministry of Education through its previous educational strategy for 2016-2020. The educational strategy of 2016-2020 emphasizes “ensuring the provision of quality equitable education inclusive of all and enhancing opportunities of lifelong learning for all through the provision of equitable opportunities of quality and inclusive education to all society members of both sexes, whether they are normal, gifted, with a disability, senior or illiterate” (Ministry of Education, 2021). In addition, the more recent Saudi Vision of 2030 aims through the National Transformation Program to provide access to education to all student groups through the increase in the capacity of educational institutions to cater for students with disabilities aged 6 to 18 years, growing from

77,575 to 200,000 Saudi students (Ministry of Education, 2021). From the above examples, it is clear that the Saudi Ministry of Education is aiming to increase the capacity of schools to accommodate students with disabilities in Saudi schools. This policy would likely result in an increase in the number of students with disabilities who are interested in higher education, especially those with learning disabilities, who represent the majority.

It is important to note that although policymakers in Saudi's Ministry of Education are currently paying more attention to students with learning disabilities in primary and secondary schools, they are not paying as much attention to those in higher education institutions (Aldabas, 2015). Although students with learning disabilities represent the majority of students with special needs in general education, there are no official data available (by either the Saudi Ministry of Education or Saudi universities) about the numbers of those students in Saudi higher education. The only currently available information provides the estimated percentages of those students, which according to Alharthi (2013), constitute 10% of all students. This could be seen from the statistical data about the percentages of students with disabilities in Saudi higher education published in 2017 by the Saudi General Authority for Statistics. According to the Saudi General Authority, in 2017 there were 175,391 students with disability in higher education which include students with the following: visual and hearing impairment, communication and understanding disorders, memory and concentration problems, and physical disabilities, without a specific mention of learning disabilities (Binbakhit, 2020). This may confirm that learning disabilities is not an officially recognised disability category in Saudi higher education.

2.1.2.2.2 The Current Status

The support that should be available to students with learning disabilities in Saudi higher education is still limited from both policy and practice aspects. On the one hand, under the Disability Code 2000, all students with disabilities, including those with learning disabilities, should be provided with educational and pedagogical services at all stages, e.g., preschool, general education, technical education, and higher education (King Salman Center for Disability Research, 2000). This means that by law Saudi universities must meet the needs of their disabled students, including those with learning disabilities, by providing appropriate academic support (including reasonable adjustments). However, disability centres/units that are responsible for facilitating the provision of reasonable adjustments (see Section 2.1.6.1) are still in early stages. More specifically, as stated by Bakri (2019), although there has been a significant increase in the budget of Saudi universities allocated by the Saudi Ministry of Education, there is still a lack of support services, and the number of disability centres/units has remained low. Recently more universities have begun to establish a disability centre/unit, but still, not all Saudi public universities have a disability centre or unit (Authority of People with Disability, 2022). This means that more is still needed to be done by Saudi public universities in this regard.

Despite the increase in the establishment of disability centres/units by Saudi public universities in the last few years, the recognition of students with learning disabilities by those disability centres is still ambiguous. For instance, not all Saudi public universities that have existing disability centres/units support students with learning disabilities. For example, during my informal communication with disability centres/units regarding the existence of and the number of students with learning

disabilities, I found that only three disability centres/units have registered students with learning disabilities. This may pose questions why such students do not exist in all Saudi universities' disability centres and units. Moreover, I found that not all disability centres/units mentioned learning disability as a disability category within their university's website. For instance, through searching Saudi public universities' websites, I have found that only two universities have mentioned learning disabilities as a disability category on their website. This means that learning disabilities as a disability category are still not fully recognised by all existing disability centres or units. This raises the question as to whether and how Saudi public universities are meeting the needs of students with learning disabilities. More specifically, the following important questions need to be asked: How do Saudi public universities support students with learning disabilities? What is the availability of reasonable adjustments to them? What are the facilitators and obstacles when it comes to supporting such students?

On the other hand, research exploring the status of and the support available to students with learning disabilities in Saudi higher education is still very limited. From 2008 to 2021, only about twelve studies within the Saudi context were published on the topic of students with disabilities in higher education and only three studies (e.g., see Binbakhit, 2020, Abed & Shackelford, 2020; Hariri, 2020) out of the twelve studies directly focused on students with learning disabilities in Saudi higher education, as summarised in Table 2.2.

Table 2. 2: Summary of Saudi literature regarding students with disabilities in higher education

Study title	Publication Type	Author & Year	Participants
1. Faculty Members' Attitudes Toward College Students with Learning Disabilities and Their Willingness to Provide Reasonable Accommodations in a Saudi Public Four-Year Postsecondary Institution	PhD thesis	Alalyani (2021)	Only faculty members
2. A Qualitative Study Investigating Post-Secondary Services for Students with Learning Disabilities at Saudi Universities	PhD thesis	Binbakhit (2020)	5 students with learning disabilities
3. Educational Support for Saudi Students with Learning Disabilities in Higher Education	Journal Article	Abed and Shackelford (2020)	16 students with learning disabilities
4. The Challenge of Being a Higher Education Student with Learning Disability: Examining Available and Needed Support	Journal Article	Hariri (2020)	24 students with learning disabilities
5. Reasonable accommodation for students with disabilities/learning disabilities: perspectives of university faculty staff and students	PhD thesis	Bakri (2019)	12 students with disabilities (only 3 with learning disabilities)
6. Services and Programs for students with learning disabilities in Saudi Universities: Reality and hopefulness	Journal Article	Al-Homaidhi (2019)	No students with learning disabilities
7. Nature of supporting services and facilities provided to female students with disabilities at King Saud University and their obstacles from their perspectives.	Journal Article	Alwabli and Binomran (2018)	47 students with disabilities (only 3 with learning disabilities)
8. The Attitudes of the Faculty Members at Umm Al- Qura University Towards the Students with Learning Disabilities in the Light of Some Variables	Journal Article	Elsubaie (2018)	129 faculty members
9. The nature of the facilities, support services and special programs that should be provided by higher education institutions to special education students from the perspective of the faculty members	Journal Article	Alwabli (2017)	58 faculty members
10. Evaluation support services for students with disabilities at Al Majmaah University	Journal Article	Arafah and Mohammed (2015)	34 students with disabilities including some students with learning disabilities.
11. The need for supporting programs for students with learning disabilities at the university level: A survey study for faculty members' perspectives at King Saud University	Master thesis	Althuwabi (2009)	280 of faculty members
12. Evaluation of support services for students with disabilities at King Saud University	Journal Article	Alkhashrami (2008)	Only 85 students with visual impairment

From the above table it is evident that the subject of students with learning disabilities is a relatively neglected area in Saudi higher education, and research

concerning students with learning disabilities is relatively new (e.g., the first study that explicitly referred to students with learning disabilities was in 2015). Furthermore, most of the studies above focused on examining the availability of support services to students with disabilities in general, with only limited focus on students with learning disabilities specifically. For example, results from seven out of twelve studies that investigated the academic support provided to students with disabilities in higher education in Saudi Arabia indicated that there was either a lack of support services, or students were expressing their dissatisfaction with the services they received (e.g., see Alkhashrami, 2008; Althuwabi 2009; Arafah, & Mohammed, 2015; Alwabli & Binomran, 2018; Abed & Shackelford, 2020; Binbakhit 2020; Hariri 2020). For example, Abed and Shackelford (2020) interviewed 16 undergraduate and postgraduate students with learning disabilities in one Saudi public university about their perceptions of educational support and found that students with learning disabilities were not included in the provision of educational support and more support was needed for those students. Also, Hariri (2020) surveyed 24 (male & female) students with learning disabilities in one private university in Saudi Arabia about the type of support provided to them and found that there was a lack of support services.

By contrast, up to date, no study has explored the obstacles that prevent the availability of academic support (reasonable adjustments) to those students, even though universities are required by the Disability Code 2000 to meet the needs of those students (e.g., through the provision of reasonable adjustments). Moreover, no study has tried to examine the ways that could facilitate support services for students with learning disabilities in Saudi universities, despite of the urgent need

for such an investigation (e.g., see Alwabri 2017; Arafah & Mohammed, 2015; Binbakhit 2020; Bakri, 2019). Thus, exploring the facilitators and barriers toward the provision of reasonable adjustments for students with learning disabilities in Saudi public universities is arguably the most concerning problem, as outlined in Table 2.3.

Table 2. 3: Recommendations of Saudi literature’s for future research regarding students with learning disabilities in higher education.

Study title	Author & year	Questions	Result	Recommendation/ Future research
Faculty Members’ Attitudes Toward College Students with Learning Disabilities and Their Willingness to Provide Reasonable Accommodations in a Saudi Public Four-Year Postsecondary Institution	Alalyani (2021)	Faculty members’ attitudes and willingness to provide reasonable adjustments to students with learning disabilities in Saudi Arabia post-secondary education.	Overall positive attitudes toward students with learning disabilities and willingness to provide them with some types of reasonable adjustments.	“Conduct research about faculty knowledge of learning disabilities, disability law, and disability services and support since such studies on these topics in Saudi postsecondary institutions are uncommon” (p.105)
A Qualitative Study Investigating Post-Secondary Services for Students with Learning Disabilities at Saudi Universities	Binbakhit (2020)	Challenges face students with learning disabilities who benefit from disability support centres in two Saudi public universities.	Challenges are pre-university challenges, (b) academic (e.g., admission policies). Challenges (e.g., low level of awareness of learning disabilities among academic staff). (c) Social and emotional challenges.	1. More studies with regard academic adjustments and policies for students with learning disabilities in higher education 2. A study addresses the obstacles that prevent the implementation of the policies and legislation supporting students with learning disabilities in higher education.
Educational Support for Saudi Students with Learning Disabilities in Higher Education	Abed and Shackelford (2020)	Explore the perceptions of students with learning disabilities regarding educational support in higher education	Students with learning disabilities are neglected and not included in the provision of educational support. More educational support is needed.	Educational support is negated despite the laws in Saudi Arabia. There is a need for increasing awareness of learning disabilities among faculty members
The Challenge of Being a Higher Education Student with Learning Disability: Examining Available and Needed Support	Hariri (2020)	Examine the type of supported provide to students with learning disabilities and the challenges they face.	Lack of support services and academic staff don’t have sufficient training. There are no disability support centres in these two universities	Extended the sample of the study
Reasonable accommodation for students with disabilities/learning disabilities: perspectives of university faculty staff and students	Bakri (2019)	The faculty’s willingness to and effectiveness in providing accommodations, level of knowledge about disability legislation, and the views of the SWD/SLDs on this same issue.	Insufficient training among faculty members to identify which reasonable accommodation to provide. Insufficient knowledge about legislations and students are not happy with the admission policies	1. Explore those academic adjustments provided to students with disabilities in higher education 2. Assessing the faculty’s knowledge of providing academic adjustments.

To conclude, the inclusion of students with learning disabilities in both general and higher education might be a more complex issue in Saudi Arabia compared to other countries. This is due to social and cultural factors, and the increased emphasis of the Saudi Ministry of Education on inclusive education with the aim to increase the capacity of education to support students with disabilities by 2030.

2.1.3 Conceptualizing the Term Learning Disabilities

The term learning disabilities was first introduced by Kirk in 1963 (Courtad & Bakken, 2011) as a term that refers to a disorder or delay in the development of one or more aspects of speech, language, reading, writing, or arithmetic that is caused by a possible cerebral dysfunction and/or emotional or behavioural disturbances. Also, Kirk (1962) emphasizes that learning disabilities should not be a result of mental or cultural factors (Kirk, 1962; cited from Dombrowski, 2015). Following the emergence of this definition, the term 'learning disabilities' has been conceptualized as a neurological disorder that does not result from mental retardation (intellectual disability), or social and cultural factors (Dirth & Branscombe, 2017). As a result, learning disabilities have been classified as a specific disability category that is different from other disability categories, e.g., intellectual disability. However, defining learning disabilities in this way is not acceptable worldwide since conceptualizing learning disabilities has changed over time and differs by context as explained next.

In the UK, the term learning disabilities has departed from Kirk's original idea where the term 'learning disabilities' was introduced to replace the term 'mental handicap' (Emerson & Heslop, 2010). Thus, in the United Kingdom 'learning

difficulties' is a general term that is often used to refer to individuals with intellectual disabilities. In addition, to refer to students with learning problems that are not related to intellectual disabilities the term "specific learning difficulties" is used instead (Emerson & Heslop, 2010). The Special Educational Needs and Disability (SEND) code of practice uses the term 'specific learning disabilities' (e.g., dyslexia, dyscalculia, dyspraxia) when one or more of the learning aspects (e.g., literacy, mathematics) are affected, while the term 'moderate learning difficulties' refers to students who need support in all areas of the curriculum with associated difficulties e.g., mobility and communication (Department for Education, 2020).

By contrast, in countries like Saudi Arabia and the USA, Kirk's approach to learning disabilities is still acceptable with some similarities and differences. For instance, in the USA, the education system uses the term 'learning disabilities' (American Psychiatric Association, 2013) and recognizes learning disabilities as a specific disability category of disability under the Individuals with Disabilities Education Act (IDEA) (Cortiella & Horowitz, 2014). Thus, the IDEA defined learning disabilities as a disorder in one or more of the basic psychological processes involved in understanding or using spoken or written language, manifesting itself in difficulties associated with listening, thinking, speaking, reading, writing, spelling, or performing mathematical calculations. Moreover, the IDEA emphasised that learning disabilities should not be caused by visual, hearing, or motor impairments, mental retardation, emotional disturbance, or cultural or environmental factors (Dombrowski, 2015). In this way, IDEA is closer to Kirk's original definition which emphasized that learning disabilities are not a result of intellectual disability, educational or cultural factors but learning disabilities are neurological in origin. It is

worth mentioning that recently the term 'specific learning disabilities' has been used in the USA, instead of 'learning disabilities', while the definition to some extent remains the same (Cortiella & Horowitz, 2014).

The Saudi education system approach is consistent with Kirk's definition that learning disabilities are a disorder that should not be a result of another disability. However, Saudi schools use the word 'difficulty' instead of 'disability' while using the same definition of learning disabilities (Ministry of Education, 2016). This means that both terms "learning disabilities' and 'learning difficulties" have the same meaning within the Saudi education system. The organizational guide for special education defines learning difficulties as "disturbances in one or more of the basic psychological processes involved in understanding and using language written or spoken language which manifests itself in disorders of listening, thinking, speaking, reading, writing (dictation, articulation, handwriting) and mathematics that are not attributable to mental, auditory, visual, or other types of disability, or learning or family care's circumstance." (Ministry of Education, 2016, p.11).

More specifically, in Saudi Arabia, the term learning difficulties covers two categories which are developmental learning difficulties and academic learning disabilities. According to Alharthi (2019), the term 'developmental learning difficulties' refers to language and mobility difficulties, while 'academic learning difficulties' are about dyscalculia, dysgraphia, or dyslexia. However, in Saudi schools, both groups are labelled as having learning difficulties. Furthermore, the Saudi education system excluded students with intellectual disabilities from the term learning difficulties and recognizes both as different disability categories (Ministry of Education, 2016). This is because the Saudi educational system categorizes

individuals with disabilities based on their IQ score, for example, intellectual disability is associated with an IQ of less than 75 on the Wechsler Intelligence Scale for Children (Ministry of Education, 2016), while the gap between academic achievements and intellectual abilities of those with learning disabilities should be at least two standard deviations (World Health Organization, 1992).

This way of grouping students into different categories (e.g., based on the discrepancy model) has been widely criticized in the broader literature for its validity and consistency (Toth & Siegel, 2020; Tanaka et al., 2011; Liddle, 2014; Philip, 2020; Siegel & Himel, 1998). The basic assumption of the discrepancy gap/model is that students with learning disabilities e.g., dyslexia should have a high Intelligence Quotient IQ score and exhibit significantly low reading skills that are not consistent with their IQ score (Tanaka et al., 2011). The discrepancy model assumes that the difficulties of students with learning disabilities (e.g., dyslexia difficulties in word recognition and phonological awareness) are not the result of or associated with intelligence. This argument has been questioned in terms of whether an IQ test could be considered a good predictor of students' literacy skills or deficits.

However, studies (e.g., Toth & Siegel, 2020; Tanaka et al., 2011) found no differences in terms e.g., word recognition and decoding, comprehension, and especially in phonological awareness between those identified as having learning disabilities and those as poor readers. In addition, changes in IQ with age have been investigated using a total of 473 children aged 7 to 16 years and it was found that IQ scores were lower for the older children suggesting an effective decrease with age. The ratio of poor readers to dyslexic children also increased with age (Siegel & Himel, 1998), meaning that IQ measurement may lose its consistency with age.

Thus, due to limitations of the discrepancy model in the definition and diagnoses of students with learning disabilities (Liddle, 2014; Philip, 2020; Riddell & Weedon, 2006; Rice and Brooks, 2004), some countries including the USA have introduced different ways of identifying students with learning disabilities such as Response to Intervention (Poch et al., 2023). Those practices have been introduced in Saudi Arabia but are currently still not effectively implemented and the use of the discrepancy model still persists (Poch et al., 2023).

To sum up, although in the Saudi education system, the word ‘difficulty’ is used instead of ‘disability’, the meaning is similar. Thus, for the purposes of the study and following other Saudi research (see Alalyani, 2021; Abed & Shackelford, 2020; Bakri, 2019 Binbakhit, 2020; Hariri, 2020) on the topic of students with learning disabilities in higher education the term “learning disabilities” will be used. Also, as Saudi Arabia is the main context of the study and as all participants for the study were from Saudi Arabia, the Saudi definition of learning difficulties (but called ‘disabilities’) was followed.

2.1.4 Models of Disability

As discussed above, learning disabilities are embedded within the view of the medical model of disability, but this does not neglect the importance of the social model. To explain, the medical and social models of disabilities are two models to approach disability from different perspectives (Palmer & Harley, 2012). On the one hand, the medical model views disability as a medical issue that exists in a person’s body or mind (Dirth & Branscombe, 2017). It, therefore, sees the cause of disability as internal to an individual, not external, which means that the disability results from

a disease, injury, or health condition (Barnes & Mercer, 2003). Shyman (2016) stated that the medical model groups people into 'disabled' and 'non-disabled' and in this sense individuals in society are divided into 'normal' versus 'abnormal'. Regarding education, the medical model plays a major role in the educational opportunities of students with disabilities. For example, the use of the medical model in the educational context classifies students into 'typically functioning' and 'non-typically functioning', which leads to the use of diagnosis and labelling of students (Haegele & Hodge, 2016). Barton (2009) argued that the use of this model in education might limit the educational opportunities of students with disabilities. This is manifested when students with disabilities are placed in separate or special schools when appropriate educational placement is not available in normal schools (Haegele & Hodge, 2016). Nevertheless, despite these disadvantages of using the medical model in educational settings, there are some advantages. In some cases, e.g., for students with learning disabilities, the use of diagnosis and labelling facilitates access to quality educational services, such as additional support services provided in resource rooms (Alquraini, 2010). Thus, students with learning disabilities were able to benefit from services that can meet their needs under Saudi Rules and Regulation of Special Education Programs (RRSEP), which emphasizes that free special education services should be provided to students with disabilities based on their needs (Aldabas, 2015).

On the other hand, the social model is concerned with the social and environmental factors that impose barriers on individuals with disabilities (Dirth & Branscombe, 2017). The advocates of this model do not view the disability as a personal tragedy (Albrecht et al., 2001); instead, they see it as an impairment caused

by social and environmental barriers (Dirth & Branscombe, 2017). This results in a focus on removing barriers in society, e.g., inequality, inaccessibility, and discrimination against disabled people (Polrachom, 2017). Based on this model, unwillingness to remove environmental barriers or refusal to facilitate access for individuals with physical impairment, for example, providing easier access to buildings, could be considered a type of discrimination (Palmer & Harley, 2012). In this way refusing to enable students with learning disabilities to access curriculum or assessments through reasonable adjustments could be seen as an environmental barrier. It can be argued that access is not limited to social or environmental access, e.g., access to the building. Access can also include access to educational opportunities, such as allowing students to have equal educational opportunities by removing barriers to learning. Waddington (2011) also stated that “the obligation to make a reasonable accommodation on the grounds of disability is based on the recognition that, on occasions, the interaction between an individual’s impairment and the physical or social environment can result in the inability to perform a particular function, job or activity in a conventional manner” (p. 187).

Regarding education, Oliver (2013) stated that acceptance of the social model has increased opportunities for disabled people and improved their lives. Some of these increased opportunities can be seen in higher education where some barriers have been removed. Polrachom (2017) made the point that the development of education legislation, such as the Equality Act 2010 in the UK, has helped to remove barriers in higher education; it has reduced discrimination against individuals with disabilities. Nevertheless, some authors have argued that the social model has only engaged with certain categories of disability while ignoring others (Chappell et al.,

2001). The argument of Chappell et al., (2001) is that the social model essentially focuses on individuals with physical and sensory impairment while ignoring individuals with learning difficulties/disabilities, which do not result from issues of access or social barriers, but instead result from individuals' impairments (Campbell & Oliver, 2013).

Viewing disability from the medical model's perspective may stigmatize students with disabilities, but in some cases like hidden disabilities, the medical model may be needed to highlight some of the hidden needs of these students. However, this does not reduce the importance of a social model's view that aims to eliminate the social and cultural barriers (e.g., attitudes, beliefs, and societal structures) that students with learning disabilities can face, especially as their needs are hidden.

2.1.5 Defining the Term Reasonable Adjustments in the Education Sector

This section begins by briefly discussing how the term 'reasonable adjustments' has started to be used in the education sector. It also discusses the differences between adjustments and modifications as well as what could be seen as reasonable or unreasonable within the education sector. Finally, this section discusses how reasonable adjustments are conceptualized in Saudi higher education.

2.1.5.1 Background Information

Before defining the term 'reasonable adjustments', it is worth mentioning how the term 'reasonable adjustments' started to be used. The term 'reasonable accommodation' or its synonym 'reasonable adjustments' was introduced as a policy

term before its application in the disability context (Ferri, 2018). Firstly, it was introduced by American employers as a policy term to accommodate specific needs related to religious practices (Ferri, 2018). Later in 1973, the Americans expanded the concept of reasonable accommodation or its synonym reasonable adjustments to the disability context (Ferri, 2018). In 1990 the term reasonable accommodation or adjustments expanded further into the disability context under the Americans with Disabilities Act which is best known as ADA. In the context of ADA, reasonable accommodation or adjustments consider a way of interdicting, i.e. prohibiting or forbidding discrimination against people with disability. Thus, under ADA American institutions (e.g., higher education institutions) were required to provide individuals with disabilities with reasonable accommodations or adjustments based on their needs as a way of non-discrimination against individuals with disabilities (Kim & Lee, 2016).

In 2000, the concept of reasonable accommodation was introduced within the European Union (EU) as a policy term that aims to promote equal treatment in employment and occupation (OJ & OJ, 2000). Article 17 of Directive 2000/78/EC of 27 November 2000 informed that workers with a disability should be provided with the required reasonable adjustments (OJ & OJ, 2000). Later the British government (which was a part of the EU until 31 January 2020) expanded the concept of 'reasonable accommodation or adjustments' to the disability context (Riddell & Weedon, 2006). This expansion was under the Disability Discrimination Act which was renamed to "Equality Act 2010" in 2010 (Kendall, 2018). Under the provision of the Equality Act 2010 putting a person with a disability at a substantial disadvantage in comparison to persons who are not disabled, can be considered a way of

discrimination. One way to avoid that is through the provision of reasonable adjustments (Kendall, 2018). Hence, under Part 2 Chapter 2 of the Equality Act 2010, British intuitions (including higher education institutions) are required to provide individuals with disabilities with reasonable adjustments to avoid any substantial disadvantages (UK Public General Acts, 2010 or Kendall, 2018).

Similarly, to the American and British governments, the Saudi government began to include the term reasonable accommodation or adjustments in its policy. The Saudi government introduced the Disability Code in 2000 which defines individuals with disabilities and their rights, namely, rights at all levels of education (King Salman Center for Disability Research, 2023). Later and similarly to the ADA and Equality Act 2010 the Saudi government introduced through the Ministry of Labor the concept of reasonable accommodation or adjustments as a policy term that aims to regulate and promote equality in the working environment for people with disabilities (Human Resources and Social Development, n.d.). Under this disability regulation, people with disabilities should not be discriminated against (including based on their disabilities) and should be provided with reasonable adjustments or accommodations based on their needs. Following the emergence of the concept of reasonable adjustments or accommodations in the labour sector, the Saudi Ministry of Education expanded this concept to the educational context. Thus, under the Saudi Ministry of Education's educational policy, Saudi universities are required to provide individuals with disabilities with some type of accommodations or adjustments (Ministry of Education, 2022).

2.1.5.2 The Definition of Reasonable Adjustments

As reasonable adjustments started as a policy term and then were adopted by the education sector, universities have tried to explain and add some clarity to this concept to fit their particular contexts. First, universities, especially in the USA, added some justifications to the concept and then explained what is meant by the term 'reasonable adjustments' by dividing it into categories. Under the education sector, King Saud University (2018) defines reasonable adjustments as any adjustments in programs, policies, or practices that allow students with disabilities to perform in the program or to have rights and benefits like nondisabled students, as well as to benefit from all programs and activities provided, and these arrangements should not impose a costly or unnecessary burden to the university. This includes reasonable adjustments to procedures, such as teaching, learning, and assessment methods to be accessible to all students (King Saud University, 2018). This definition was emphasised by Conderman and DeSpain (2017) who specified that reasonable accommodations/reasonable adjustments are slight changes in the way instructors provide content to students or the way students demonstrate their knowledge and access curriculum and assessments. Thus, within the education sector, reasonable accommodation or its synonym reasonable adjustment does not include instructional interventions for academic subjects (see Section 2.1.5.3) or behaviour, instead, they are considered as a way for students to demonstrate their knowledge and abilities in a subject matter (Beech, 2010).

Furthermore, to clarify the term reasonable adjustments, within the literature (e.g., Conderman and DeSpain, 2017; Elliott et al., 2011) adjustments were divided into two main categories (teaching adjustments and examination adjustments),

which are also divided into four main categories: a) presentation accommodations, b) response accommodations, c) setting accommodations, and d) timing and scheduling accommodations). Presentation accommodations are referred to adjustments/accommodations that enable disabled students access the same materials as non-disabled students but in different forms (e.g., visual, auditory, tactile, or both) (Alhossein, 2014; Conderman & DeSpain, 2017; Elliott et al., 2011). For example, students who have reading difficulties (e.g., dyslexia) can access the same text materials as other students using auditory presentation adjustments (e.g., digital text, eBooks, or audiobooks) (Conderman & DeSpain, 2017). Moreover, students who have writing difficulties (e.g., dysgraphia) can be provided with visual presentation adjustments (e.g., lecture notes before the beginning of the lecture) instead of taking notes during the lecture.

Response accommodations describe adjustments that allow students with disabilities to demonstrate their knowledge and skills differently (Alhossein, 2014; Conderman & DeSpain, 2017; Elliott et al., 2011). In this sense, disabled students are allowed to respond to assignments or assessments in a variety of ways (Alhossein, 2014). For example, students who have reading or writing difficulties (e.g., dyslexia or dysgraphia) can be allowed, for example, to respond orally instead of giving written responses. While setting accommodations refer to changes to the environment or providing alternative places for people with disabilities to participate or demonstrate what they have learned (Alhossein, 2014; Conderman & DeSpain, 2017; Elliott et al., 2011) In this perspective, disabled students are allowed to request changes to the environment or ask to be provided with different places. For instance, students with disabilities can request a less distracting environment if they are easily

distracted to participate much better in class (Conderman & DeSpain, 2017). Students with learning disabilities who may have ADHD (attention deficit hyperactivity disorder) may request some form of setting accommodations (e.g., taking exams in a different room).

Time and scheduling accommodations describe the adjustments in the amount of time that is needed to complete an assignment or assessment (Alhossein, 2014; Conderman & DeSpain, 2017). In this regard, students with disabilities are allowed to be provided with extra time to complete assessments or assignments. For example, students with learning disabilities (e.g., dyslexia or dysgraphia) who may process information slowly can be allowed to extend time on exams and coursework (see Table 2.4).

Table 2. 4: Summary of adjustments/accommodations categories and types.

Presentation adjustments	Response adjustments	Setting adjustments	Timing and scheduling adjustments
Note before the lecture.	Alternative assignments formats ex: oral presentations instead of written assignments.	Taking exam in different room.	Extended time to complete coursework.
Large font size on presentation and exam questions	Alternative exam formats ex: oral presentations instead of written exam.	Use of computers in class and in exam (use computer for written assignments).	Extended time on exam.
Recording the lecture.	Extra credit assignments.	Use of calculator in exam.	
Allow misspelling, incorrect punctuation, and poor grammar on class assignments		Use of reader (someone reads the exam to the student).	
		Use of proofreader (to assist with grammar correction and punctuation).	
		Use of note taker	

The sources: These adjustments/accommodations are the most frequently mentioned in the literature related to the context of students with learning disabilities in higher education (e.g., Abdelkarim, 2014; Bakri, 2019; Skinner, 2007; and Konur, 2002).

2.1.5.3 Adjustments and Modifications

Universities aim to play their part in helping their diverse student populations by improving their policies through differentiating between two main different categories in this regard, which are adjustments in their varied forms and modifications. Adjustments/accommodations are described as slight changes in how the information is presented or accessed by students with disabilities (Conderman & DeSpain 2017; Gregg, 2012), while modifications are considered substantial changes in the content being taught (Darrow, 2007; Gregg, 2012). In other words, modifications are referred to as more substantial alterations that may not only change the subject being taught but also could lower the academic standards to meet the performance of disabled students (Friend & Bursuck, 2015). One example of modification is allowing students with disabilities to answer only the main ideas for a unit of instruction. Another example of modification is reducing the options in multiple-choice questions (Conderman & Jung, 2014). Therefore, authors have argued that modifications can be provided to students who cannot progress in the educational setting without modifying the learning standards both in general and higher education (Alhossein, 2014).

By contrast, adjustments/accommodations unlike modification, do not modify the academic or learning standards, instead, they just change the way disabled students are presented to, access information or demonstrate what they have learned. Generally, in the context of education, reasonable adjustments or accommodation can be considered either teaching adjustments or examination adjustments. Teaching accommodation refers to changes in the way of delivering instruction without changing the content, knowledge, or learning standards (Elliott et

al., 2011). Hence, under teaching adjustments disabled students (e.g., students with learning disabilities) are expected to learn the same content as other students but by using alternative teaching and learning instructions formats (e.g., using presentation or response adjustments). Similarly, examination adjustments or accommodations describe the alterations made to the assessment procedure without fundamentally changing what the test is measuring (The IRIS Center for Training Enhancements, 2010). Thus, in this sense, students with disabilities (e.g., students with learning disabilities) are not expected to be provided with less complex exam questions compared to other students, instead, they will be provided with the same questions but via alternative ways of accessing them, for example, using setting or timing and scheduling accommodations (Alhossein, 2014).

2.1.5.4 Reasonable and Unreasonable

Despite of the efforts on the part of the universities to clearly define the term 'reasonable accommodation or adjustments', this concept can still produce much confusion in the educational sector. The word 'reasonable' means 'within the limits of what it would be rational or sensible to expect; not extravagant or excessive; moderate' (Oxford English Dictionary, 2022). In this regard, 'reasonable' means 'within the limit' or 'moderate'. Hence, the question that needs to be asked is 'how universities determine what is 'moderate' or 'within particular limits'. Universities are trying to draw some boundaries around the word 'reasonable'. However, the boundaries to the word 'reasonable' cannot be easily drawn since what can or cannot be considered as 'reasonable' are affected by many factors, such as the university's reputation, budget, and policy. This means that what is 'moderate' or 'within a university's limits varies from one university to another. King Saud University, for

example, has stated in its regulatory and rules procedures for serving students with disabilities that reasonable adjustments are “arrangements that do not impose a costly or undue burden on the university” (p. 13). In this sense, what can or cannot be considered ‘reasonable’ highly depends on the university budget (Walker, 2017). Second, the absence of a clear guide of what is reasonable and what is not could also add more complexity to the word ‘reasonable’. For instance, Kendall (2018) through a semi-structured interview questioned 20 faculty members at a university in the North of England about their experiences of supporting students with disabilities. Faculty members reported that it was not clear to what extent adjustments should or could be made.

Nevertheless, the term ‘reasonable accommodation or adjustments’ could be used as one united concept, as discussed above, or could be broken into separate concepts. The American and Saudi education sectors (which are similar in their educational policy) use the term ‘reasonable accommodation or adjustments’ as one concept in some cases but in other instances break down this concept into smaller units. For example, in Saudi Arabia, King Saud University (which is a leading university in the field of special education) uses the term ‘reasonable accommodation or adjustments’ when referring to adjustments and accommodation in general. However, when only referring to adjustments or accommodations related to adjustments related to academic matters, they used the more particular term ‘educational adjustments’ which is called in Arabic (المواءمات الأكاديمية -
المواءمات الأكاديمية).

2.1.5.5 The Term Reasonable Adjustments within the Saudi Education System

The term reasonable adjustments or its synonym reasonable accommodation is used in Saudi Arabia, but also at the same time, other similar terms are used (e.g., academic adjustments, academic support, educational support, support services, and supports/facilitators). Like in the USA and the UK, King Saud University uses the term “reasonable accommodation” in their policy guide, such as ‘Students with Disabilities Services’ policies and procedures at King Saud University (King Saud University, 2018). Moreover, several studies on the topic of students with learning disabilities in higher education use the term “reasonable accommodation” (e.g., see Alalyani, 2021, Alhossein 2014; Bakri, 2019). For instance, Alalyani (2021) adapted the following term and definitions for their study as follows: “reasonable accommodations: Making modifications or adjustments for persons with disabilities in an environment or workplace to enable them access and the chance to perform major job tasks” (p.15). Bakri (2019) used a similar term and definition, namely, “reasonable accommodation: A reasonable accommodation involves providing special treatment or facilities or making adjustments in order to enable access to a service” (p. 18).

Furthermore, in Saudi Arabia, there are still different terms that are used to refer to the same idea of reasonable adjustments or accommodation. For example, the Saudi Ministry of Education uses the term support services which is named in Arabic (alkhidamat almusanida – الخدمات المساندة) to refer to services provided to students with disabilities in higher education (Ministry of Education, 2022). Similarly, a public Saudi university called Princess Nourah bint Abdulrahman University uses the word “support” to refer to services they provide to students with disabilities, such

as services related to academic, administrative, psychological, social, and technical aspects (Princess Nourah bint Abdulrahman University, 2023). Also, in Saudi research related to students with learning disabilities in higher education, the term “educational support” is used to refer to the support provided to those students. For instance, Abed and Shackelford (2020) in their work used the term “education support” in exploring the availability of such support (including reasonable adjustments) to students with learning disabilities in Saudi higher educational institutions. It can be seen that in Saudi Arabia different terms are used to refer to the same purpose, namely, the support provided to students with disabilities in higher education. Consequently, this study uses the term “reasonable adjustments” as it is evident within the Saudi, the UK and USA educational policies and research studies.

In summary, reasonable adjustments started as a broader policy term which was then adopted by the educational sector. It can be said that, currently, the concept of reasonable adjustments is a well-known concept within the educational systems of such countries as the UK, USA, and Saudi Arabia. Furthermore, from the literature review of the current study, it can be seen that much effort is spent to clarify and incorporate the concept of reasonable adjustments into education systems. I have also explored what counts as an adjustment/accommodation and what might not. However, “many uncertainties remain as to what counts as reasonable” (Karellou, 2019, p.48). I hope a further investigation into facilitators and barriers toward the provision of reasonable adjustments can add more clarification to the concept of reasonable adjustments.

2.1.6 The Provision of Reasonable Adjustments in Higher Education

This section examines how reasonable adjustments are provided in higher educational institutions. It also explores the need of students with learning disabilities for reasonable adjustments considering their unique characteristics, specifically, reading and writing difficulties.

2.1.6.1 The Role of disability centres/units

As universities (including in Saudi Arabia, the USA and UK) are required by law to respond to the needs of their students with disabilities e.g., through the provision of reasonable adjustments, they have established what is called disability centres/units. Disability centres/units exist to offer reasonable accommodations to students with disabilities and are required to support educational equity, encourage inclusion, and facilitate access to higher education (Chiu et al., 2019). Thus, through disability centres/units, universities are required to ensure that students with disabilities have equal opportunities through equal access to all university programs and related services, on a par with those without disabilities (Abdulrahman & Ayad 2012). Universities must also encourage via disability centres/units' inclusive practices in their institutions by responding to the diverse needs of their students, e.g., through the provision of reasonable adjustments (Chiu et al., 2019). At the same time, they have to ensure that disability legislation and the university's policy, namely, the policy related to disability, have been implemented (King Saud University, 2018). Thus, this makes the disability centres/units support services in universities the responsible department for the provision of reasonable adjustments.

However, faculty members, students with learning disabilities and disability centres/units all have a role in the provision of reasonable adjustments.

According to Students with Disability Services Policies and Procedures at King Saud University, the provision of reasonable adjustments is a shared responsibility between faculty members, students with disability, and staff members at the disability centres/units. Disability centres/units have significant responsibilities which may include direct consultation and counselling, disseminating details about services and programmes, developing policies, educating faculty members and staff about disabilities and accommodations, facilitating the provision of reasonable adjustments, facilitating program administration, and providing training for the staff members at the disability centres/units (Shaw & Dukes, 2006). Furthermore, disability centres/units are responsible for providing information on disability policy and procedures, as well as evaluating students' requests for reasonable adjustments and providing access to reasonable adjustments to eligible students (King Saud University, 2018). The role of faculty members is to include a statement in the syllabus pointing out their willingness to accommodate the needs of their students through the provision of reasonable adjustments. Also, faculty members are responsible for increasing the awareness of their students about the existence of the disability centre or unit on campus and encouraging them to communicate with the disability centre/unit when needed. Another essential role of faculty members is to provide reasonable adjustments while treating the information of their disabled students in a more confidential manner (King Saud University, 2018). Furthermore, students with disability have a role in the provision of reasonable adjustments. Students are required to disclose their disability to the disability centres/units to be

able to receive the needed adjustments. This could be evaluated through providing medical, psychological, or other specialist evaluations, to help centres assess students' needs for reasonable adjustments (Chiu et al., 2019). This may be criticized on the grounds that the need for labels may stigmatize students with disabilities. However, some studies justified the use of diagnosis because that can sometimes be helpful in determining the suitable adjustment based on students' specific needs (Weis et al., 2016). For instance, students with learning disabilities for example, in mathematics, will require different adjustments from those who have a learning disability in reading, e.g., dyslexia (Ofiesh et al., 2004). Also, another important role of students with disability with regard to the provision of reasonable adjustments is to inform faculty members about their needs for reasonable adjustments through letters provided to them by the disability centre/unit in their universities.

2.1.6.2 The Need for Reasonable Adjustments

The literature indicates that the provision of reasonable adjustments is needed to remove barriers experienced by students with learning disabilities (Luke & Schwartz, 2007), allowing them to have equal educational opportunities to non-disabled students (Laura et al., 2020), and promote their academic success (Los Santos et al., 2019; Lightner et al., 2012; McGregor et al., 2016). As stated by Vitello and Mithaug (1998) and Ainscow (2005), inclusive education concerns eliminating barriers presented to students with disabilities and responding to the diverse needs of these students. Hockings (2010) also refers to inclusive education in higher education as “ways in which pedagogy, curricula and assessment are designed and delivered to engage students in learning that is meaningful, relevant and accessible

to all” (p.1). Hence, in this regard, inclusive education concerns not only the design and the provision of assessment but also consider the diversity of students, enhances participation, and ensures accessibility to all students.

One challenge students with learning disabilities face in higher education is the inability to access and present information or demonstrate what they have learned using similar teaching and learning methods as other students, e.g., non-disabled students (Weis et al., 2016). Students with a learning disability, i.e., dyslexia, often have difficulties with phonemic awareness, phonological processing, word recognition and decoding resulting in poor reading comprehension which is an essential skill for students to access written information. Also, students with a learning disability in writing (e.g., dysgraphia) may have difficulty with shaping letters, organizing thoughts on paper, and keeping track of thoughts when writing. Importantly, this can result in creating a gap between students’ written concepts and comprehension (Cortiella & Horowitz, 2014) that might lead in turn to an inability to demonstrate knowledge through writing. Therefore, difficulties of students with learning disabilities in those two major skills of reading and writing can limit their access to curriculum and assignments which puts these students at a disadvantage and in unequal education opportunities compared to non-disabled students. Studies have shown that students with learning disabilities found it difficult to access the lectures, for example, taking notes during the lectures, and some find it challenging to access assignments, e.g., doing written assignments (Fuller et al., 2004), due to their poor writing skills. More specifically, Heiman and Precel (2003) compared 191 college students with learning disabilities to 190 college students without learning disabilities in different areas, including academic difficulties, learning strategies, and

functioning during the examinations. Results indicated that students with learning disabilities were more nervous and frustrated during exams, needed more time to complete the tasks, and reported using more learning strategies, strategies related to writing, compared with students without learning disabilities. Thus, many students with learning difficulties can find it difficult to study using the conventional teaching and testing methods used in higher education institutions. Therefore, to eliminate the learning barriers presented to students with learning disabilities, such as barriers related to access and presentation of material, or access to assignments (e.g., demonstrating knowledge), instructors must provide these students with a variety of fair teaching and testing adjustments based on their specific needs (Trimmis & Bessas, 2016). For example, this might include a range of accommodations, such as providing students with access to information using different formats, e.g., lecture recordings; or giving them different options for assignments, such as extra credit on tasks; forgiving spelling or grammar mistakes (Trimmis & Bessas, 2016); and presenting information in different formats, e.g., oral presentation instead of written assignments. Such adjustments to the learning and teaching methods could help in removing barriers to learning for those students and provide them with a more equitable educational experience. Studies have shown that removing barriers to learning and improving access to curriculum and assessment could improve the academic success of students with learning disabilities in higher education (Cortiella & Horowitz, 2014; Barazandeh, 2005; Timmerman & Mulvihill, 2015). For instance, students with learning disabilities who used reasonable adjustments reported fewer assignment difficulties (McGregor et al., 2016), more average grades (Trammell, 2003), and achieving more success in higher education (Couzens et al., 2015). This

implies that the provision of reasonable adjustments would likely influence the academic success of students with learning disabilities in a more positive way (Los Santos et al., 2019). By contrast, studies indicated that students who did not request or use provided reasonable adjustments would likely report more difficulties in assignments (McGregor et al., 2016) and lower grades (Troiano et al., 2010) in their academic studies.

To sum up, providing students with learning disabilities with reasonable adjustments could help in removing barriers to learning and thus provide equitable and more fair educational opportunities and ultimately promote their academic success in higher education. Consequently, reasonable adjustments can be seen as fundamental to students with learning disabilities and their studies in higher education.

2.1.7 Facilitators and Barriers to the Provision of Reasonable Adjustments

This section presents and discusses theoretical and empirical research with regard to barriers and facilitators toward the provision of reasonable adjustments to students with learning disabilities in higher education.

2.1.7.1 Barriers to the Provision of Reasonable Adjustments

As discussed above, reasonable adjustments are important to the academic success of students with learning disabilities in higher education (Kendall, 2018), yet the provision of these adjustments is negatively influenced by different problems and issues. According to the relevant literature on the provision of reasonable adjustments to students with learning disabilities, there is an extensive list of potential hurdles to be overcome that can prevent the provision of reasonable

adjustments. These may include the following: barriers, such as negative personal beliefs (Barazandeh, 2005; Wolanin & Steele, 2004, Zhang et al., 2010); negative attitudes (Elsubaie, 2018; Doikou-Avlidou, 2015); stigmatizing and labeling (Binbakhit, 2020; Marshak et al. 2010); lack of awareness and knowledge of learning disabilities (Kendall, 2016; Barazandeh, 2005); lack of knowledge of reasonable adjustments (Ryder and Norwich, 2019; Schabmann et al, 2020; Sandoval et al, 2021); inadequate knowledge of legal responsibilities (Bakri, 2019; Zhang et al., 2010); unwillingness to provide reasonable adjustments (Alkhashrami, 2008; Kendall, 2016; Mohaned & Shackelford, 2020; Strnadová et al., 2015); lack of work and collaboration among, e.g., faculty members, disability centres/units staff members, and students with disabilities (Alwabli & Binomran, 2018; Strnadová et al., 2015); absence of policy or ineffective policy of reasonable adjustments (Al-Homaidhi, 2019; Mohaned & Shackelford, 2020; Arafah & Mohammed, 2015); lack of human resources and financial resources (Binbakhit, 2020; Alwabli 2017), and lack of training provision and workshops (Hariri, 2020).

The literature indicates that barriers toward reasonable adjustments to students with learning disabilities can be complex. This is because barriers toward the provision of reasonable adjustments are dynamic in nature, affecting each other, making the provision of reasonable adjustments a more complicated matter. For instance, one barrier to the provision of reasonable adjustments to students with learning disabilities is the unwillingness of faculty members to provide reasonable adjustments (Alkhashrami, 2008; Kendall, 2016; Mohaned & Shackelford, 2020; Strnadová et al., 2015). However, the willingness of faculty members is influenced by factors such as personal beliefs, awareness of learning disabilities, and

awareness of students' needs. Research (e.g., Zhang et al., 2010; Wolanin and Steele, 2004) indicated that the willingness of faculty members to the provision of reasonable adjustments is mostly influenced by their personal beliefs toward students with learning disabilities. Thus, the personal beliefs of faculty members toward students with learning disabilities are critical in the provision of reasonable adjustments. Due to the hidden nature of learning disabilities, some faculty members still do not believe in learning disabilities, and some may respond to students with learning disabilities with suspicion (Wolanin and Steele, 2004). Some faculty members still question whether students with learning disabilities have a disability or not, while others still hold the belief that students with learning disabilities do not seem to have a disability (Binbakhit, 2020). Some faculty members even question whether it is right and fair to provide reasonable adjustments to such students (Trimmis & Bessas, 2016; Zhang et al., 2010). As a result of such attitudes, many faculty members are not willing to provide reasonable adjustments (Wolanin and Steele, 2004).

Furthermore, the provision of reasonable adjustments is limited by the level of knowledge of learning disabilities, reasonable adjustments, and legal responsibilities. For example, inadequate knowledge of learning disabilities among disability centres/units' staff can be seen as a big problem, because if staff members of the disability centres/units do not have enough knowledge of learning disabilities, it becomes more difficult to support those students (Binbakhit, 2020). Furthermore, knowledge of learning disabilities among faculty members is critical for the provision of reasonable adjustments. Studies showed that faculty members need to have an adequate understanding of learning disabilities (Barazandeh, 2005; Schabmann et

al., 2020; Binbakhit, 2020) to better accommodate the needs of students with learning disabilities. Thus, faculty members' understanding of reasonable accommodations is critical to their willingness to offer reasonable accommodations” (Bakri, 2019, p.184). Research (e.g., Ryder and Norwich, 2019; Schabmann et al., 2020; Sandoval et al., 2021) showed that despite faculty members showing willingness and interest toward the provision of reasonable adjustments, inadequate knowledge of reasonable adjustments affected their willingness to provide such reasonable adjustments. Ryder and Norwich (2019) delivered a questionnaire to 164 faculty members from 12 UK universities about their attitudes and awareness of dyslexia (which is a type of learning disability). The result showed that although faculty members had a positive attitude toward students with dyslexia and reasonable adjustments, they felt unsure about the practical ways that could meet the needs of such students through the provision of reasonable adjustments. This is consistent with Schabmann et al., (2020) who surveyed 234 university instructors about the problems faced by students with dyslexia and the support that was available and needed. Participants reported that there is a lack of information about dyslexia, especially, on how to meet the needs of such students. Sandoval et al., (2021) interviewed 119 faculty members about their knowledge and beliefs about reasonable adjustments and found that despite faculty members having a favourable attitude toward the provision of reasonable adjustments, a lack of knowledge was evident among faculty members.

In addition, the absence of collaboration between students with learning disabilities, faculty members, and disability centres/units could prevent the provision of reasonable adjustments. One critical issue concerning collaborations is, as

already discussed, the unwillingness of faculty members to work with students with disabilities (Alwabli & Binomran, 2018; Mohaned & Shackelford, 2020). The other big challenge is the lack of collaboration among faculty members and disability centres/units regarding the provision of reasonable adjustments. For instance, some of the issues concerning collaboration are that faculty members are not informed early on by the disability centre/unit about the needs of students for reasonable adjustments (Bakri, 2019). Another aspect of this problem could be that faculty members do not accept the reasonable adjustments suggested by the centres (Alwabli & Binomran, 2018; Mohaned & Shackelford, 2020). Moreover, another issue concerning collaboration is the unwillingness of students with learning disabilities to collaborate with the disability centres/units or faculty members by disclosing their disabilities. For example, Binbakhit (2020) interviewed five students with learning disabilities from two Saudi public universities and one student reported that “staff members at the disability centre always ask me to come and I refused because I did not want anyone to know about my learning disability. I was scared” (p.103).

Nevertheless, the absence of policy (Abed & Shackelford, 2020) or ineffective policy regarding reasonable adjustments (Al-Homaidhi, 2019; Arafah & Mohammed, 2015) as well as the absence of human, financial, and informational resources (Binbakhit, 2020; Alwabli 2017) limited the provision of reasonable adjustments in Saudi public universities. Regarding policy, Arafah and Mohammed (2015) surveyed 34 students with disabilities (including students with learning disabilities) at one public Saudi university and found that there was an ineffective policy supporting disabled students. Binbakhit (2020) and Abed and Shackelford (2020) explored the provision of reasonable adjustments to students with learning disabilities at two

different Saudi public universities and found that the lack of reasonable adjustment policy limited the provision of reasonable adjustments to this group of students. This makes the lack of written policies and procedures for students with learning disabilities a major issue affecting their access to required support (Binbakhit, 2020).

Inadequate resources, such as human, financial, and informational resources, could inhibit the provision of reasonable adjustments. Several studies (e.g., Ineson & Morris, 2006; Alwabli, 2017) have indicated that it is important to have more financial and informational support available regarding reasonable adjustments. Ineson and Morris (2006) said that “more sources of funding, perhaps from disability organizations or alumni donations, would increase the opportunities available to make reasonable adjustments” (p.26). Also, Alwabli (2017) pointed out that informational support regarding support services in higher education in Gulf Countries is needed. Similarly, Binbakhit (2020), claimed that a lack of human recourse such as staff members at specialized disability centres/units can limit the provision of reasonable adjustments.

2.1.7.2 Facilitators to the Provision of Reasonable Adjustments

To improve the provision of reasonable adjustments to students with learning disabilities, there is a need to increase awareness (Barazandeh, 2005; Kendall, 2016), knowledge of learning disabilities, reasonable adjustments (Trimmis & Bessas, 2016), and legislation supporting students with learning disabilities (Lipka & Shecter-Lerner, 2020). In addition, it is essential to provide faculty and staff members with more professional developmental programs, such as specialist professional training (Zhang et al., 2020; Trimmis & Bessas, 2016; Lipka & Shecter-Lerner, 2020;

Murray et al., 2008). It is also important to ensure the availability of diagnosis documentation (Binbakhit 2020), as well as encourage the disclosure of disability by the students, by providing better information and support (Kendall, 2016).

A key facilitator to the provision of reasonable adjustments is enhancing faculty members' personal beliefs about reasonable adjustments (Zhang et al., 2010). This measure should be implemented along with efforts to increase awareness about learning disabilities among faculty members and disability centres/units' staff members. Without such awareness and positive attitudes among faculty and disability centres/units' staff members, it will become more difficult to understand the educational needs of those students and provide them with appropriate reasonable adjustments. In addition, it has been shown that faculty members must have an adequate level of knowledge of learning disabilities, the needs of students for reasonable adjustments (Trimmis & Bessas, 2016), and laws supporting students with learning disabilities (Lipka & Shecter-Lerner, 2020). This means that interest and positive attitudes toward the provision of reasonable adjustments are not enough to facilitate the provision of reasonable adjustments for students with learning disabilities. For instance, Lipka and Shecter-Lerner (2020) surveyed 53 faculty members about the level of contact, knowledge, training, and attitudes regarding learning disabilities. Even though faculty members showed positive attitudes, information regarding learning disabilities and legislation supporting students with learning disabilities was limited. This was consistent with Trimmis and Bessas (2016) who found through surveys that more knowledge on how to support students with learning disabilities is needed. Thus, without sufficient knowledge of what constitutes learning disabilities and how important reasonable adjustments are

to the academic success of those students, it may be difficult for higher education institutions to facilitate the provision of reasonable adjustments to their disabled students, especially for students with hidden disabilities.

Furthermore, without adequate knowledge of learning disabilities and reasonable adjustments, it becomes difficult for faculty members to fully engage with the legislations and policies of their universities (Ryder & Norwich, 2019). This shows that preparing faculty members to meet the needs of such students through providing ongoing opportunities, e.g., professional development programs and training, is an urgent need to improve the provision of reasonable adjustments (Trimmis & Bessas, 2016; Lipka & Shecter-Lerner, 2020; Murray et al., 2008). Studies (e.g., Abdella, 2018; Park et al., 2012) have shown that willingness of faculty members toward the provision of reasonable adjustments is positively influenced by faculty members' level of training. For example, faculty members who had more training were more willing to accommodate the needs of students with disabilities (Abdella, 2018; Park et al., 2012). Thus, "post-secondary education teachers need further training and education through a continuous, lifelong process to contribute effectively to the teaching of learning-disabled students" (Trimmis & Bessas, 2016, p. 294). More specifically, Becker and Palladino (2016) suggested that when the provided training focuses on faculty members' knowledge, experiences, and attitudes, it can improve the experiences of both faculty members and students with learning disabilities.

Nevertheless, some research (e.g., Marshak et al., 2010) has shown that self-identifying is one of the key barriers that university students with learning disabilities face. Students with learning disabilities avoid self-identification to prove their self-sufficiency, avoid labelling, and avoid integrating the presence of disability into their

college identity (Marshak et al., 2010). This means that students with learning disabilities prefer not to benefit from the available services because they want to avoid the stigma of disability. However, the disclosure of the disability (self-identification) can be considered as one of the main facilitators toward the provision of reasonable adjustments. It can be argued that since the provision of reasonable adjustments is based on the disclosure of the disability, reasonable adjustments will only be made if the individual discloses a disability (Ineson & Morris, 2006). Consequently, the disclosure of a disability becomes a fundamental facilitator toward the provision of reasonable adjustments, in fact without disclosure of a disability, reasonable adjustments cannot be made. Also, the disclosure of disability needs to be supported by official documentation of disability. This was considered by Binbakhit (2020), who emphasised that “diagnosis documentation can facilitate receiving appropriate and adequate post-secondary educational services” (p.99).

In summary, it would be very challenging for higher educational institutions to successfully accommodate the needs of their disabled students, e.g., through the provision of reasonable adjustments, without considering the internal and external facilitators and barriers toward the provision of reasonable adjustments. Higher educational institutions must consider their faculty and staff members’ personal beliefs about learning disabilities and their willingness to collaborate with each other. Also, it is a necessity for higher education institutions to provide faculty and staff members with adequate professional developmental programs, e.g., training to enhance their level of knowledge of both learning disabilities and reasonable adjustments. Without considering these internal and external factors, the provision of reasonable adjustments may risk failure in practice.

2.1.8 Gaps in the Current Literature

From a global and Saudi perspective, research within higher education seems to be paying more attention to students with physical disabilities, such as hearing and visual impairments (Binbakhit 2020). Conversely, less attention is given to students with hidden disabilities, such as learning disabilities (Moriña, 2022; Binbakhit 2020). This lack of research that focuses on students with learning disabilities in higher education has limited our understanding of inclusive education within higher education (Collins et al., 2019; Couzens et al., 2015; Barkas et al., 2020). Consequently, more research is needed regarding students with learning disabilities in higher education, especially, when it comes to the academic support and success of those students (e.g., see Couzens et al., 2015; Collins et al., 2019; Moriña & Biagiotti, 2021; Moriña 2022).

Globally, for example, in Spain, the UK and the USA, the inclusion (e.g., academic support) of students with learning disabilities is still to some extent driven by the provision of reasonable adjustments. Literature from the above countries showed that this model of support or provision is still challenged for its clarity of concept (Walker, 2017; Los Santos et al., 2019), misconceptions of learning disabilities (Timmerman & Mulvihill, 2015), and the lack of knowledge of who should be effectively implementing such a model in higher education (Ryder & Norwich, 2019). Therefore, authors from the above countries suggested that further research into the concept of reasonable adjustments in higher education is needed (Los Santos et al., 2019). Many authors pointed to the importance of investigating the perspectives of faculty members and students with disabilities (e.g., with learning disabilities) toward the provision of reasonable adjustments (Timmerman & Mulvihill,

2015; Sandoval et al., 2021). Furthermore, research is needed into the most effective methods of educating faculty and staff to improve institutional processes for students with disabilities in higher education (Los Santos et al., 2019).

Within the Saudi literature, where inclusive education is still in its infancy, research concerning inclusive education is particularly needed. Regarding students with learning disabilities in higher education only a small number of researchers have explored this topic and much of that research investigated either the willingness of faculty members (e.g., see Bakri, 2019 and Alalyani, 2021) toward the provision of reasonable adjustments, or the availability of such adjustments to those students (e.g., see Arafah & Mohammed, 2015, Alwabli & Binomran, 2018, Al-Homaidhi, 2019; Alkhashrami, 2008). Researchers came to the conclusion that despite some willingness (e.g., see Bakri, 2019; Alalyani, 2021) (but also lack of willingness, e.g., see Abed & Shackelford, 2020) of faculty members toward the provision of reasonable adjustments, the provision of reasonable adjustments itself is still limited in Saudi higher education (e.g., see Alkhashrami, 2008; Althuwabi 2009; Arafah, & Mohammed, 2015; Alwabli & Binomran, 2018; Abed & Shackelford, 2020; Binbakhit 2020; Hariri 2020). To date, no study has explored in depth why the provision of reasonable adjustments is still limited when it comes to students with learning disabilities in Saudi higher education institutions. More specifically, no study investigated facilitators or obstacles associated with the provision of reasonable adjustments to students with learning disabilities in Saudi universities. Therefore, grounded upon the study's literature review and gap the following research questions were explored:

1. How do students with learning disabilities, faculty and staff members at disability centres/units describe the provision of reasonable adjustments at Saudi public universities?
2. How do faculty and staff members at disability centres/units understand the terms learning disabilities and reasonable adjustments in Saudi public universities?
3. To what extent and in what ways are faculty members interested in the provision of reasonable adjustments to students with learning disabilities in Saudi public universities?
4. How do faculty and staff members at disability centres/units describe the capacity and availability of resources regarding the provision of reasonable adjustments in Saudi public universities?
5. What are the perspectives of students with learning disabilities, faculty, and staff members at disability centres/units about reasonable adjustments policies at Saudi public universities?
6. What are the facilitators and barriers that students with learning disabilities, faculty and staff members at disability centres/units recognise with regards to the provision of reasonable adjustment at Saudi public universities?

2.2 Section Two: Theoretical Framework

2.2.1 Introduction

The above literature review indicated that reasonable adjustments are not limited to one person/group or department within higher education. Instead, the literature indicates that the provision of reasonable adjustments is a shared responsibility between different groups, such as students with learning disabilities, faculty members, and disability staff members at centres/units. The willingness of each group toward the provision of reasonable adjustments is influenced by different factors and reasons. For instance, faculty members' willingness to make reasonable

adjustments is shaped by their personal beliefs (Zhang et al., 2010; Wolanin and Steele, 2004). Similarly, the role of staff at disability centres/units in the provision of reasonable adjustments can be limited by their level of understanding of learning disabilities (Binbakhit, 2020). Finally, students who are meant to benefit from reasonable adjustments could decide not to disclose their disability fearing they might be stigmatized (Binbakhit, 2020).

Furthermore, the literature review for the current study demonstrated that the factors that can influence the provision of reasonable adjustments are not limited to the above reasons (internal factors) too. Instead, it has been identified that some external factors might influence the provision of reasonable adjustments. For example, the absence of an effective policy can hinder the provision of reasonable adjustments (Al-Homaidhi, 2019; Mohaned & Shackelford, 2020; Arafah & Mohammed, 2015). Also, when higher education institutions have limited capacity and resources, such as human, information or finance, the provision of reasonable adjustments can be challenging (Binbakhit, 2020; Alwabli, 2017; Ineson & Morris, 2006). This indicates that the implementation of such a model of support within higher educational institutions can be influenced by different levels of influencers which are internal and external to individuals.

2.2.2 The Chosen Theoretical Framework

As mentioned by Cresswell (2012), the aims and questions of a study influence the choice of the research theoretical framework. Therefore, a study must be guided by its aims and research questions. The objective of this study was to examine the factors, such as facilitators and barriers, that affect the provision of reasonable adjustments to students with learning disabilities in Saudi public

universities. As outlined in the introduction, there were various internal and external factors, including social, cultural, and political factors, that could impact the provision of reasonable adjustments to students with learning disabilities. Therefore, to achieve the study's objective, it was necessary to consider a theoretical framework that addresses different standpoints.

Various theories address learning and human development, such as behavioral (Harold & Corcoran, 2013), cognitive (So, 1964), social-constructivism (Vygotsky, 1987), and Bronfenbrenner's ecological system (1979). Behavioral and cognitive theories both focus more on the relationship between students and teachers during the learning process and place less emphasis on other factors like social, cultural, and policy influences. Behavioral theory, for example, views learning as a process of changing behaviors (Al-Shammari et al., 2019), considering the learner as mostly passive and reliant on the teacher. Cognitive theory emphasizes the role of cognitive skills in the learning process, such as connecting new information to prior knowledge (Ertmer & Newby, 2013). However, as these theories do not address the influence of social, cultural, and policy factors on students' learning or development, they were seen as less relevant to the aims of the study.

Other theoretical perspectives that relate to different aspects of human learning and development include the social-constructivism perspective (Vygotsky, 1987) and Bronfenbrenner's ecological system (1979). Constructivism emphasises the influence of society and culture on an individual's learning and development (Al-Shammari et al., 2019). For instance, Vygotsky highlighted that learning is a social process involving students, teachers, and other children (Christensen, 2016).

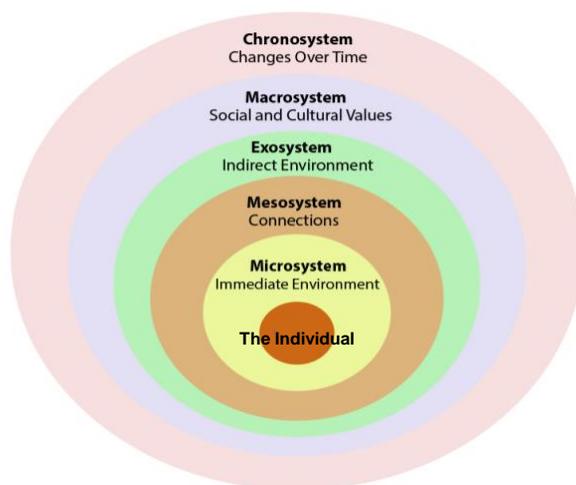
However, it remains unclear from Vygotsky's perspective how educational policy and the wider socio-political and cultural context affect students' learning or development. By contrast, Bronfenbrenner's Ecological Systems Theory (Bronfenbrenner, 1979) stresses the role of various factors, including social, cultural, societal, and policy, all of which can impact human development. This aligns with findings in the literature which indicated that social, cultural, societal, and political factors all play a role in the provision of reasonable adjustments. Therefore, employing Bronfenbrenner's theory assisted in achieving the aim and purpose of the study by allowing the examination of all factors influencing the provision of reasonable adjustments for students with learning disabilities at Saudi public universities. The following sections will elucidate the use of Bronfenbrenner's theory in this study and evaluate its strengths and weaknesses.

2.2.3 Bronfenbrenner's Ecological System Theory

Urie Bronfenbrenner is one of the most notable researchers in the field of developmental psychology and is interested in individuals' development. He believed that the field of developmental psychology focuses excessively on investigating what is wrong with the person while ignoring what is wrong with the environment around them (Bakri, 2019). More particularly, Bronfenbrenner stressed that "each human being can be perceived as embedded in multiple nested systems, and that development is between the individual and various systemic factors or components that influence each other" (Bronfenbrenner, 1979). In late 1979 Bronfenbrenner developed the Ecological Systems Theory (EST) of human development which consists of five types of systems; the Micro-system, the Meso-system, the Exo-system, the Macro-system, and the Chronosystem (Bronfenbrenner, 1979). Each

system represents an aspect of an influence that may affect the development or learning of the individual (See Figure 2.1).

Figure 2. 1: The Ecological Systems Theory (EST) proposed by Bronfenbrenner.



For example, the first layer (e.g., the Micro-system) represents the central point of Bronfenbrenner's ecological system in that it places the individual (e.g., in this study students with learning disabilities) and their characteristics (e.g., reading and writing difficulties) at the centre of a nested system. This layer describes the influences closest to the individual such as parents, family members, teachers, non-teaching staff and peers (e.g., in this study Saudi public universities, faculty members, and the staff members at disability centres/units).

Second, the Meso-system symbolizes influences that have direct contact with the individual. Kamenopoulou (2016) posits that this system represents the relationships and connections between factors in the Micro-system such as school, teachers, or family relationships (e.g., in this study faculty members, staff members at disability centres/units, and their universities). The Exo-system describe the

factors not directly embedded within the individual's immediate environment but can still influence the individual's learning such as school policies and allocated resources (Anderson et al., 2014). In this study the Exo-system refer to Saudi public universities' capacity, availability of resources, and policy). The Macro-system represents the broader cultural and social influences in which the school operate, such as the social environment, laws and culture that may have a direct or indirect effect on individuals' learning (e.g., in this study the broader cultural beliefs concerning learning disabilities and educating students with learning disabilities). Finally, the Chronosystem represents the changes in all layers and their members across time e.g., see the Table 2.5.

Table 2. 5: Summary of Ecological Systems Theory (EST) proposed by Bronfenbrenner.

System	Explanation
Micro-system	The immediate contexts in which the individual participates and the people in these contexts in direct contact with the individual.
Meso-system	Influences between members of the micro-systems, e.g. school and family relationships.
Exo-system	External influences on the individual from systems not directly related with or external to the micro-system, e.g. policy and legislation.
Macro-system	Broader cultural and social influences, e.g. social and economic status.
Chrono-system	Changes in all systems and their members across time.

The source: adapted from Kamenopoulou (2016)

Ecological Systems Theory (EST) is a widely used psychological theory in the field of human development. The EST is commonly discussed in the literature in the context of the inclusion of students with disabilities (Kamenopoulou, 2016), especially in higher education (Renn & Arnold, 2003). Kamenopoulou (2016) points out that “adopting EST can be a useful theoretical framework for research exploring

inclusion and SEN/D because it enables the consideration of various factors, both internal and external to the child, which may interact and influence inclusion” (p.517).

A study conducted by Geldenhuys and Wevers (2013) used Bronfenbrenner’s ecological model to explore the aspects that influence the implementation of inclusive education in mainstream primary schools in the Eastern Cape, South Africa. Inclusion is often embedded within nested systems that are not limited to the individual but are the result of the interactions between different systems that are internal and external to the individual. Thus, through observations and semi-structured interviews with 28 participants, Geldenhuys Wevers (2013) used Bronfenbrenner’s ecological model to understand what aspects/factors most influenced the inclusion in primary schools in Eastern Cope. The study indicated that the implementation of inclusive education in Eastern Cope primary schools is not hindered only by the schools’ immediate environment. Importantly, different aspects/factors that were external to the schools’ environment negatively influenced the implementation of such practices.

The previously discussed study found that the entire education system, policy, parents, and peers can have a role in the provision of inclusive education. For example, the immediate contexts (the Micro-systems) of the individual, such as home environment and peers limited students’ access to learning. For example, the study reported that some peers refused to work with students with disabilities due to their disabilities. Also, other factors related to other systems, such as the Meso-system, the Exo-system, and the Macro-system were found to influence the provision of inclusive education. The findings highlighted a number of challenges, for example, the lack of availability of resources in schools, such as academic

support programs for students with disabilities, as well as limited abilities by schools to provide inclusive education for their disabled students.

This shows that using Bronfenbrenner's ecological model in research that focuses on inclusion, e.g., Geldenhuys and Wevers' (2013) study, helps in understanding the phenomena being studied from a more holistic perspective by considering both the individual and broader social environment. This idea is consistent with the extensive literature review for this study, which highlighted that the provision of reasonable adjustments can be influenced by different factors and reasons that are both internal and external to the individual. More specifically, the literature review of the study indicated that the provision of reasonable adjustments to students with learning disabilities in Saudi universities is shaped by the interaction between students' unique characteristics (e.g., reading and writing difficulties) and other systemic factors (e.g., faculty members, staff members at disability centres/units and university resources such as policies, disability legislation as well as human and financial resources). This highlights the complexity of the provision of reasonable adjustments and relationships between students with learning disabilities and various systems.

In light of Bronfenbrenner's ecological model, it is evident that both the needs of students with learning disabilities (e.g., assistance with reading and writing difficulties) and other systemic factors that are external to students with learning disabilities should be considered during the provision of reasonable adjustments (Kamenopoulou, 2016). It follows then that in order to understand the reasons behind the challenges for the provision of reasonable adjustments for students with learning disabilities in Saudi public universities, there is a need for a framework that

encompasses these factors that sit within various systems. In doing so, it is relevant to adapt Bronfenbrenner’s ecological model (Bronfenbrenner, 1979) to explore barriers and facilitators to reasonable adjustments existing within different levels/systems.

2.2.4 Connecting Bronfenbrenner’s Ecological System Theory to the Literature Review of the Study

As mentioned above, this study aims to identify factors that influence the provision of reasonable adjustment to students with learning disabilities in Saudi universities (e.g., barriers and facilitators). In accordance with the EST, the focus will be on the role of the Micro-system (e.g., faculty members, disability staff members at centres/units, and Saudi public universities), the Meso-system (e.g., the interactions between faculty members, disability centres/units, and their Saudi public universities), the Exo-system (e.g., Saudi public universities’ capacity, availability of resources, and policy), and the Macro-system (e.g., broader cultural beliefs of students with learning disabilities and learning disability itself). Thus, facilitators and barriers toward the provision of reasonable adjustments to students with learning disabilities can be shaped by the interactions between these multiple levels/systems e.g., see Table 2.6.

Table 2. 6: Summary of Ecological Systems Theory (EST) adapted for this study.

System	Explanation
Micro-system	In this study faculty members, disability centres/units’ staff members, and their universities are conceptualized as the immediate contexts regarding the provision of reasonable adjustments.
Meso-system	Influences between members (the micro-system) are represented in this study as interactions/collaboration between faculty members, staff members at disability centres/units, and their universities.
Exo-system	In this study the external influences (the exo-system) are the universities’ capacity, resources, and policy regarding reasonable adjustments
Macro-system	Broader cultural and social influences (e.g., in this study, faculty and disability staff members at centres/units’ broader cultural beliefs concerning students with learning disabilities and concepts encompassing learning disability itself).

2.2.4.1 The Micros-system

Based on the literature of the current study, people who have direct contact with students with learning disabilities and share a responsibility in the provision of reasonable adjustments are faculty members and disabilities staff members at centres/units. The literature reports that faculty members play a vital role in the provision of reasonable adjustments and academic success for students with learning disabilities (Murray et al., 2008; Lipka & Shecter-Lerner, 2020). One significant role of faculty members is to maintain positive personal beliefs (e.g., high expectations) of students with learning disabilities. While students with learning disabilities have a legal right to receive reasonable adjustments, the personal beliefs of faculty members could be considered barriers to these adjustments. It has been shown that the personal beliefs of faculty members around the concept of learning disabilities have the most direct influence on their willingness to implement the provision of reasonable adjustments for students with learning disabilities (Abed & Shackelford, 2020; Bakri, 2019; Zhang et al., 2010). Studies have also indicated that the personal beliefs of faculty members are influenced by their level of knowledge, college/discipline, training and even nationality (Abed & Shackelford, 2020; Alhossein, 2014; Elsubaie, 2018; Zhang et al., 2010).

Also, the level of knowledge of reasonable adjustments among faculty members has a direct relationship with the provision of reasonable adjustments (Zhang et al., 2010). For instance, some faculty members have stated that they agreed with the importance of providing reasonable adjustments to students with learning disabilities, but they did not know how to meet the needs of such students in the most effective way (Bakri, 2019; Harir, 2020; Ryder and Norwich, 2019).

Furthermore, the background of knowledge in learning disabilities of disability centres/units' staff members has a strong influence on the provision of reasonable adjustments. Studies (e.g., Bakri, 2019; Binbakhit, 2020) have shown that some staff members at disability centres/units feel uncertain of which reasonable adjustments to provide to students with learning disabilities due to a lack of background knowledge about learning disabilities.

2.2.4.2 The Meso-system

The Meso-system symbolizes influences between factors in the micro-system, e.g., in this study, it represents the influences between faculty members, disability staff members at centres/units, and their universities. Based on the extensive literature review for this study, barriers to reasonable adjustments could take numerous forms. One way to approach the barriers to reasonable adjustments is by considering the interactions between higher educational institutions (e.g., faculty members, staff members at disability centres/units, and their universities), which can be best explained through the meso-system. This is because the interactions/collaboration among these three groups can limit or facilitate the provision of reasonable adjustments to students with learning disabilities.

For example, disability centres/units are responsible for providing details about services e.g., the availability of reasonable adjustments, educating faculty and their staff about services, providing access, and facilitating services e.g., evaluating students' requests for reasonable adjustments (Shaw & Dukes, 2006). For example, staff members at disability centres/units are responsible for determining which reasonable adjustment is more suitable for a particular student and informing faculty

members about the needs of students with learning disabilities for reasonable adjustments (King Saudi University, 2013). Furthermore, disability centres/units are accountable for providing information on disability policy and procedures e.g., awareness as well as developing policies when they did not exist (Shaw & Dukes, 2006).

In return, the important role of faculty members in the provision of reasonable adjustments is to have a good relationship with the staff at disability centres/units Binbakhit (2020). For example, faculty members may be accountable for increasing the awareness of their students about the existence of the disability centres/units, treating the information of their disabled students confidentially and indicating their willingness to accommodate the needs of their students through the provision of reasonable adjustments (King Saud University, 2018). This shows that effective communication between the staff at disability centres/units and faculty members is essential to the provision of reasonable adjustments. By contrast, a lack of communication between disability centres/units and faculty members can negatively affect the process of the provision of reasonable adjustments.

Nevertheless, universities as educational institutions play a critical role in the provision of reasonable adjustments e.g., by establishing disability centres/units in their universities (Bakri, 2019), ensuring equal access to services (Abdulrahman & Ayad 2012), and providing training opportunities for their staff (Hariri, 2020). First, as discussed at the beginning of this chapter (see Section 2.1.2.2.2), access of students with learning disabilities to the provision of reasonable adjustments at Saudi public universities is limited which will be explored through is study. Second, despite the allocated funds by the Saudi Ministry of Education to Saudi public universities, there

is still a lack of disability centres/units (Bakri, 2019). For instance, not all Saudi public universities have a disability centre or unit (Authority of People with Disability, 2022). Moreover, through my informal communication with Saudi universities regarding disability centres/units, I have found that only a few (e.g., three disability centres/units) have students with learning disabilities registered at the time of the study. This points to the question of why learning disabilities were not recognised by all disability centres/units as a disability category. Third, universities are responsible for providing professional development programs to their faculty and staff members at disability centres/units' regarding the provision of reasonable adjustments. However, several studies on the Saudi context of reasonable adjustments have reported that there is a lack of training and professional development programs for both faculty and staff members at disability centres/units' (Binbakhit, 2020; Hariri, 2020).

2.2.4.3 The Exo-system

The Exo-system indirectly influences the individual's learning (e.g., policy and allocated resources). These influences have been described by Anderson et al., (2014) as (external) factors that are not directly embedded within the individual's immediate environment, but still, affect the individual's learning (e.g., in this study university's capacity, resources, and policy).

As shown in the literature review (See Section 2.1.7.1), there is a strong relationship between policy and the provision of reasonable adjustments, and thus the absence of policy or ineffective policy in higher educational institutions can influence the provision of reasonable adjustments (Al-Homaidhi, 2019; Alquraini,

2010; Arafah & Mohammed, 2015). This literature also confirmed that the absence of policy is strongly connected to the lack of provision of reasonable adjustments in Saudi universities (Binbakhit, 2020). This can be supported by considering the establishment of policies for students with learning disabilities in Saudi universities. For example, Binbakhit (2020) interviewed staff members at disability centres/units in two public Saudi universities about their attitudes regarding the establishment of policies for students with learning disabilities in their disability centres/units. She found that there is a lack of policies within disability centres/units and that this negatively affected provision of reasonable adjustments to those students. Moreover, the staff members at these disability centres/units stated that the lack of written policies is connected to the unwillingness of faculty members to implement the provision of reasonable adjustments. Thus, some faculty members feel unwilling to provide these adjustments for students with learning disabilities due to the absence of policy regarding the provision of reasonable adjustments in Saudi universities (Alwabli & Binomran, 2018; Binbakhit, 2020; Mohaned & Shackelford, 2020).

Furthermore, as previously discussed, capacity e.g., disability centres/units (Chiu et al., 2019) and resources e.g., financial, informational (Alwabli, 2017), human (Binbakhit, 2020) are critical to the provision of reasonable adjustments. For example, many studies have shown that some faculty members may not be sure how to meet the needs of students with learning disabilities through the provision of reasonable adjustments due to a lack of knowledge (Bakri, 2019; Ryder and Norwich, 2019). Also, a lack of knowledge of the needs of students with learning disabilities can make it difficult for staff members at disability centres/units to

determine what is the suitable adjustment (Binbakhit, 2020). Moreover, as argued by Shaw & Dukes (2006), disability centres/units have an important role in the provision of reasonable adjustments such as providing information on services (including reasonable adjustments) and disability policy. This means that universities ought to have the appropriate capacity (e.g., disability centres/units) to effectively implement the provision of reasonable adjustments. However, as claimed by Bakri (2019) such a capacity in the Saudi public universities may be limited.

2.2.4.4 The Macro-system

The macro-system represents the broader cultural and social influences, such as social environment, laws and culture that may directly or indirectly affect the individual's learning. Specifically, this system refers to the larger cultural world surrounding individuals, together with the underlying belief systems (e.g., in this study it refers to broader cultural beliefs of faculty and staff members at disability centres/units concerning students with learning disabilities and learning disability itself) (Bronfenbrenner, 1979; Duerden & Witt, 2010).

Cultural beliefs surrounding students with learning disabilities in Saudi Arabia have shaped their educational opportunities in higher education, including the provision of reasonable adjustments designed to help them. This could be seen from many different perspectives. First, this could be seen in the low number of students with learning disabilities admitted to Saudi universities. For example, in countries like the United Kingdom and the United States, students with learning disabilities represented the majority of university students with disabilities (HESA Free Online DATA Table; National Centre for Learning Disabilities, 2017), while in Saudi Arabia

70% of admitted students with disabilities are students who are identified as being gifted (Al-Mejane et al., 2009). This finding points out that cultural and ideological beliefs concerning learning disabilities have affected the inclusion of students with learning disabilities in Saudi universities.

Furthermore, there are cultural beliefs among faculty and staff members at disability centres/units about the right of students with learning disabilities to be educated in higher education. For example, through my informal communication with one of the staff members at the disability centre/unit in one public Saudi university, he stated that “we don’t have students with learning disabilities because students with learning disabilities can only be found in schools”. This expression led me to think that the social and cultural beliefs around learning disabilities among faculty and staff members at disability centres/units in Saudi universities may have limited the educational opportunities for those students.

Arguably, the social and cultural beliefs around learning disabilities in Saudi society, as mentioned by Bakri (2019), have delayed the development of disability centres/units and services for students with learning disabilities in Saudi universities over the past years. Moreover, despite the emphasis of the Saudi Disability Code of 2000 that all students with disabilities should receive free educational services in all phases of education, including those with learning disabilities, the number of disability centres/units that support students with learning disabilities is still limited (Bakri, 2019).

2.2.5 Weaknesses and Limitations of Bronfenbrenner's Ecological System Theory

Despite its usefulness in research on inclusive education, Bronfenbrenner's Ecological Systems Theory (Bronfenbrenner, 1979) has its weaknesses and limitations. As argued by Engler (2007), one weakness is that the theory primarily emphasizes the negative effects on human development while neglecting to explain how individuals succeed in a negative environment. Engler (2007) suggested that adding resilience to Bronfenbrenner's theory can help explain how people overcome challenges in a negative environment. This perspective suggests that highlighting how people overcome negative experiences can help us understand the challenges they face. However, understanding the factors or reasons that affect human development can also be used to make suggestions for improving human lives – and in the case of this study, suggestions about disability support in higher education.

Another weakness of the Ecological System model is that it doesn't account for how globalisation and information technology can influence human development (Christensen, 2016). As societies become more globally connected, the relationship between different societal levels has become stronger, influencing how knowledge processes among individuals have become more diverse (Christensen, 2016). Drakenberg (2004) suggested adding a level or system to interpret the influence of an international level, for example, globalisation. Yet, while the model may lack factors related to globalisation and information technology, the existing literature has shown that local policy (Abed & Shackelford, 2020) and cultural factors (Zhang et al., 2010) might have a stronger influence on student support. Therefore, this

weakness (e.g., globalisation) may not affect exploring the provision of reasonable adjustments using Bronfenbrenner's Ecological Systems framework.

In addition, Bronfenbrenner's (1979) Ecological Systems Theory has also been criticized for its limitations. For instance, one potential limitation found regarding the use of Bronfenbrenner's Ecological System Theory (Bronfenbrenner, 1979) is that this model/theory requires the researcher to study the phenomena from different perspectives, e.g., by considering the internal and external factors (Sontag, 1996). Thus, the use of such a mode may require the researcher to adopt a multidimensional research design to be able to explore multiple systemic factors (Odom et al., 2004). In such a situation, the research may be faced with the challenge of studying different levels/systems and examining the interaction between those multiple factors. This may be a time-consuming process and place the researcher under pressure to collect more data or look for different factors/systems that may or may not be relevant to their study. But, as identified earlier in the literature review of this study, the provision of reasonable adjustments is a complex matter. Thus, from a literature review point of view, adapting such a model can provide a more holistic picture of the issue being examined, such as identifying facilitators and barriers toward the provision of reasonable adjustments to students with learning disabilities at Saudi public universities.

2.2.6 The Connections Between Theoretical Framework and Research Questions

The following table presents the links between the literature review, the research questions, and the theoretical framework of the current study.

Table 2. 7: The connections between the theoretical framework and research questions.

Research Questions	System and explanation	Support from the literature review
1. How do students with learning disabilities, faculty and staff members at disability centres/units describe the provision of reasonable adjustments at Saudi public universities?	RQ1 connects to the Center of this model which is the individual and their needs, such as the need for the provision of reasonable adjustments.	The literature review of the study indicated that the provision of reasonable adjustments is needed to students with learning disabilities to overcome their reading and writing difficulties.
2. How do faculty and staff members at disability centres/units understand the terms learning disabilities and reasonable adjustments in Saudi public universities?	RQ2 and RQ3 connect to The Micro-system which present the immediate contexts in which the individual participates (in this study, faculty members and disability staff members at centres/units represent the immediate contexts).	The literature review of the study supported the claim that the understanding of learning disabilities and reasonable adjustments among faculty members and staff members at disability centres/units, as well as willingness of faculty members have an immediate influence on the provision of reasonable adjustments.
3. To what extent and in what ways are faculty members interested in the provision of reasonable adjustments to students with learning disabilities in Saudi public universities?		
4. How do faculty and staff members at disability centres/units describe the capacity and availability of resources regarding the provision of reasonable adjustments in Saudi public universities?	RQ4 and RQ 5 connect to The Exo-system which explains the external influences on the individual from systems that are not directly related (in this study the exo-system is universities' capacity, resources, and policy regarding reasonable adjustments).	The literature review of the study indicated that the provision of reasonable adjustments is not only limited to willingness and understanding of either learning disabilities or reasonable adjustments (internal factors). But also, external factors such as universities' capacity, resources, and policy can influence the provision of reasonable adjustments.
5. What are the perspectives of students with learning disabilities, faculty, and staff members at disability centres/units about reasonable adjustments policies at Saudi public universities?		
6. What are the perspectives of students with learning disabilities, faculty, and staff members at disability centres/units about reasonable adjustments policies at Saudi public universities?	RQ6 connect to The Exo-system, Meso-system, and Macro-system, which present the internal and external factors that influence the individual (in this study the provision of reasonable adjustments. The Macro-system presents the broader cultural and social influences (in this study broader cultural believes concerning students with learning disabilities and learning disability itself)	The literature review of the study indicated that the provision of reasonable adjustments could be influenced by internal factors such as understanding, willingness, and collaboration. External factors such as capacity, resources, and policy can affect the provision of reasonable adjustments. Also, the social and cultural believes are important to the provision of reasonable adjustments.

2.2.7 Summary of the Chapter

This chapter was divided into two sections and provided an extensive review of the theoretical and empirical literature on the provision of reasonable adjustments for students with learning disabilities in higher education. Section One discussed the concept of learning disabilities and reasonable adjustments, as well as facilitators and barriers toward the provision of reasonable adjustments. The literature indicated

that the concept of inclusive education is still relatively new in Saudi Arabia, especially regarding including students with learning disabilities in higher education. Thus, providing students with disabilities, especially those with learning disabilities, with full access to reasonable adjustments remains ambiguous. More specifically, there is still limited knowledge of learning disabilities and reasonable adjustments, few effective policies, as well as generally prevalent negative social, cultural, and personal beliefs concerning learning disabilities and reasonable adjustment which might limit the provision of these adjustments. The second part of the chapter presented Bronfenbrenner's Ecological Systems Theory and explained the connection between the ecological systems and the research problem. It justified the emerging framework for the study in relation to Bronfenbrenner's theory, that the provision of reasonable adjustments is influenced by various levels/systems, where each level/system influenced each other, making the provision of reasonable adjustments part of a more complex picture. The next chapter gives details of the methodological approach adopted in the study and describes the selection of participants, the methods of data collection and analysis used for the study.

Chapter Three: Research Design and Methodology

3.1 Introduction

The previous chapter presented the literature review and the theoretical framework which informed this study. The literature review on the provision of reasonable adjustments for students with learning disabilities in Saudi universities indicated that the availability of reasonable adjustments for those students is still limited. Therefore, further research is urgently needed to explore the obstacles and facilitators toward the provision of reasonable adjustments to students with learning disabilities in Saudi universities (Alwabli & Binomran, 2018; Binbakhit, 2020; Bakri, 2019; Hariri, 2020; Al-Homaidhi, 2019). This chapter begins by presenting the philosophical assumptions and the analysis of their fundamental tenets and justifications that guided this research. Then, it explains the methodological approach, methods of data collection and analysis adopted for the study. First, details of the research paradigm and methodology are given, followed by a description of the data collection tools, data collection procedures, and methods of data analysis. Finally, information concerning the ethical issues relevant to the study is presented.

3.2 Research Paradigm

According to Hanson et al. (2005), the researcher's paradigm or worldview is determined by the research problem, not the methods used. This study aimed to identify factors, specifically, facilitators and barriers that influence the provision of reasonable adjustments to students with learning disabilities at Saudi public

universities. According to the theoretical framework for this study, namely, the ecological systems theory (Bronfenbrenner, 1979), the provision of reasonable adjustments to students with learning disabilities at Saudi universities is seen as shaped by the interaction between students' unique characteristics (e.g., reading and writing difficulties) and other systemic factors (e.g., faculty members, staff members at disability centres/units, university, policies, and the interaction between these factors). This highlights the complexity of providing reasonable adjustments given the relationships between students with learning disabilities and the social and policy environments (that is, different ecological model systems). To illuminate some of the complexity of the provision of reasonable adjustments, initially, there was a need as well as to explore in-depth the provision of reasonable adjustments to students with learning disabilities at Saudi public universities (through narrative data). To achieve the study aims, a pragmatic approach was adopted, as discussed in more detail below.

Paradigms can help a researcher examine a particular research problem (Kaushik, & Walsh, 2019), and for the researcher to determine their paradigms, ontological and epistemological assumptions must be considered (Mack, 2010). The basic sense of the terms 'ontology' and 'epistemology' is that the term 'ontology' refers to the nature of existence (Thomas, 2017). In other words, it is based on the researcher's assumptions about 'reality' (Denzin & Lincoln, 2011), whether reality is socially constructed or already 'exists' (Pring, 2004). According to Punch and Oancea (2014, p.16), 'Epistemology' refers to "the relationship between the knower and what can be known". In other words, it is the relationship between the researcher and reality. These different approaches to embedding the scholarly enquiry within a

framework that informs the methodology and methods of enquiry are commonly defined as Positivism and Interpretivism. These two different research paradigms imply a different view of the world and assume that there are different ontological and epistemological assumptions about reality and our relationship with it (Thomas, 2017; Robson, 2011). The positivist paradigm's ontology is that reality exists outside of the researcher and has meaning independently of any consciousness (Mack, 2010). The epistemological assumption of this paradigm is that reality can be observed, measured, and studied scientifically, and thus the social world can be studied using scientific methods (Thomas, 2017). Positivist research uses e.g., surveys to collect quantitative data to study an existing phenomenon independently, without affecting or distributing what is being studied (Rehman & Alharthi, 2016). One major criticism of positivism is that it can be difficult to research the social world objectively. Consequently, it becomes difficult to determine 'absolute truths' in social sciences by using scientific methods, because different people interpret the social world differently (Mack, 2010). However, it could be argued that scientific methods, such as surveys, are still useful in terms of gathering descriptive information and providing insight into an issue being studied (Creswell et al., 2011).

Interpretivism is another research paradigm which assumes that reality does not exist independently, but instead, it is constructed through interaction between individuals (Robson, 2011; Rehman & Alharthi, 2016). Thus, reality is interpreted differently by different people, leading to multiple perspectives (Mack, 2010), and the relationship between reality and the researcher (e.g., epistemology) is subjective, indicating that meaning does not exist independently. Instead, it is constructed by human beings as they interact and engage in social interaction and construct

meaning. Interpretive researchers often use methods such as interviews to collect qualitative data to capture and interpret the meaning and experiences (Robson, 2011) of individuals about the social phenomena with which they interact (Rehman & Alharthi, 2016). One limitation of interpretivism is subjectivism, as researchers are directly involved in the matters researched (Mack, 2010). Also, another characteristic of interpretivism is the limitations in generalizing findings to a larger population (Grix, 2018). However, not all research seeks to generalise its findings instead, qualitative data can be a useful tool that provides detailed information and also gives participants a voice to enable an in-depth understanding of the issue being studied (Creswell et al., 2011).

The research aim of the study is to explore facilitators and barriers toward the provision of reasonable adjustments, so it was impossible to completely isolate myself as a researcher from the interactions with the participants during data collection. Instead, there was a need to shift my role as a researcher from observer to participant in order to explore in-depth facilitators and barriers toward the provision of reasonable adjustments as discussed next. Thus, there was a need for the study to collect both numerical and narrative data to fully explore facilitators and barriers toward the provision of reasonable adjustments which are sitting within different levels/systems as explained considering Bronfenbrenner Ecological Systems Theory (Bronfenbrenner, 1979). Therefore, the pragmatic approach was deemed to be most useful.

3.3 The Pragmatic Paradigm

Pragmatism is a sum of beliefs defined by Ormerod (2006) as a philosophy “that can be traced back to the academic sceptics of classical antiquity, who denied the possibility of achieving authentic knowledge regarding the real truth and taught that we must make do with plausible information adequate to the needs of practice” (p. 892). In other words, pragmatism is shifting attention from ‘ontology and epistemology assumptions’ to ‘what best’ answers the research questions. Thus, from a pragmatic perspective, researchers should use any methodology that works best for their research problems (Tashakkori & Teddlie, 1998; Morgan, 2007). That is because pragmatism focuses on research aims and questions, not ontological or epistemological assumptions (Kaushik, & Walsh, 2019). Following the research aims and questions of the study, a pragmatic paradigm was adopted.

Pragmatism, as a research paradigm, avoids debating difficult philosophical notions such as truth and reality (e.g., a worldview based on either positivism or interpretivism) (Kaushik, & Walsh, 2019). Instead, it acknowledges that there can be single or numerous realities that can be investigated empirically (Creswell et al., 2011). The positivism and interpretivism paradigms assume that quantitative and qualitative approaches cannot be mixed in one single study as both approaches have different worldviews (Gunasekare, 2016). It can be argued that the pragmatic approach values both ‘subjective’ and ‘objective’ knowledge to find out ‘what works’ and what best answers the research problem and questions (Tashakkori and Teddlie, 1998; Morgan, 2007). Arguably, the combination of assumptions, ideas, and methodologies may be highly beneficial and provide scholars with new ways to comprehend and explore the world (Gunasekare, 2016). As emphasised by

Gunasekare (2016), the mixed-method approach stands between the extremes of quantitative research and qualitative research, striving to appreciate the wisdom of both positions, while also pursuing a feasible middle answer to many research problems of interest.

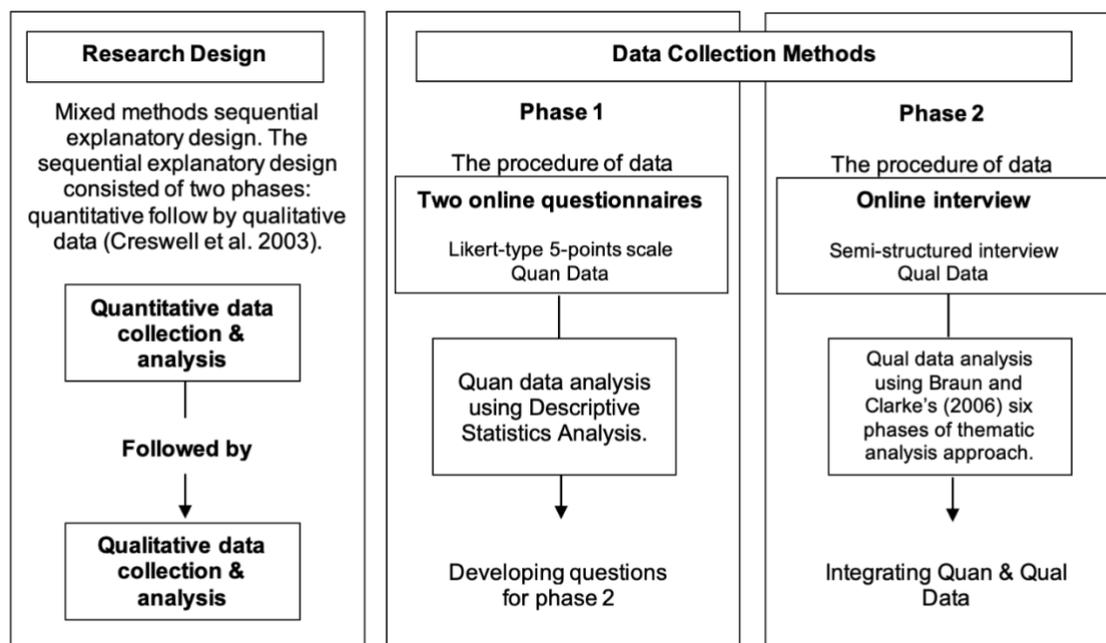
Thus, it was important for the purpose of this study to adopt a research paradigm that can help in exploring numerous perspectives, stances, and standpoints (Gunasekare, 2016) to achieve its aims and questions. Thus, pragmatism as a philosophical approach was seen as appropriate for this research study because it enabled the collection of both quantitative and qualitative data (Arishi, 2020) to develop a deeper understanding of facilitators and barriers toward the provision of reasonable adjustments.

3.4 Research Design and Data Collection Methods

In response to the research aims, the literature review, and the theoretical framework for this study e.g., the ecological systems theory (Bronfenbrenner, 1979), it was found that facilitators and barriers toward the provision of reasonable adjustments cannot be positioned within one factor/system (the Micro-system, e.g., people in the immediate learning environment , the Meso-system, e.g., their interactions, the Exo-system, e.g., universities's resources and policy, and the Macro-system, e.g., broader socio-cultural believes). Instead, they are a result of the interaction between those different levels/systems. This indicated that one methodological approach may not be sufficient to fully explore all levels/systems. So, I decided to integrate research methods to examine the various levels/systems (e.g., through questionnaires) to better understand how levels/systems influenced each

other (e.g., via interviews). Therefore, this study used a sequential mixed-method design as presented in the next figure.

Figure 3. 1: The research design and data collection methods used in this study.



The source: developed by the researcher.

The distinction between quantitative and qualitative research may be seen as a false dichotomy (Gunasekare, 2016). However, a well-mixed method design offers a valuable research tool to investigate a phenomenon (Bartholomew & Brown, 2012). Creswell et al., (2011) suggested that to implement a well mixed method design (e.g., see Figure 3.1), there is a need to explain how the combination of quantitative and qualitative data collection methods can address the research problem and questions. Concerning the research questions, as informed by the literature review for the current study, factors that influenced the provision of reasonable adjustments to students with learning disabilities at Saudi public

universities were expected to appear within different factors/systems as presented above. Before the study, there was not enough knowledge or data available to understand how these levels/factors were conceptualized or constructed within Saudi higher education (e.g., see Binbakhit, 2020; Bakri, 2019; Abed & Shackelford, 2020). More specifically, there was little information, e.g., regarding the attendance of students with learning disabilities and knowledge of faculty members concerning learning disabilities (Alalyani, 2021) and reasonable adjustments (Bakri, 2019) at Saudi public universities. So, first, there was a need, first to generate information on relevant aspects of knowledge/ understanding, policy, and broader beliefs about learning disabilities e.g., through the use of questionnaires, then elaborate on those findings to examine and verify this information e.g., through an interview for in-depth understanding of facilitators and barriers toward the provision of reasonable adjustments.

This way or order of collecting data is called an explanatory quantitative-qualitative (Quan-Qual) mixed method design which is known as a sequential design (Creswell et al., 2011; Hanson et al., 2005; Gunasekare, 2016). As defined by Creswell and Zhang (2009) the sequential explanatory design involves first collecting and analyzing quantitative data using, e.g., a questionnaire, and then collecting and analyzing qualitative data through, for instance, interviews (Creswell & Zhang, 2009). The reason for this approach is that quantitative data and results give an overall view of the research problem and that subsequent data collection and analysis of qualitative data can further refine, expand, or clarify this overall view (Creswell 2003; Clark, 2011; Subedi, 2016). More particularly, in response to the research aims and questions, there was a need to generate information about each level/system

involved in the provision of reasonable adjustments, such as faculty members' understanding and willingness, as well as the university's availability of capacity, recourses, and policy e.g., with the use of e-questionnaires (phase one). Then, there was a need to extend and explain the general picture e.g., through interview (phase two) for more understanding of factors within each level/system. Without using this order, it may have been difficult for the study to achieve its aims and objectives.

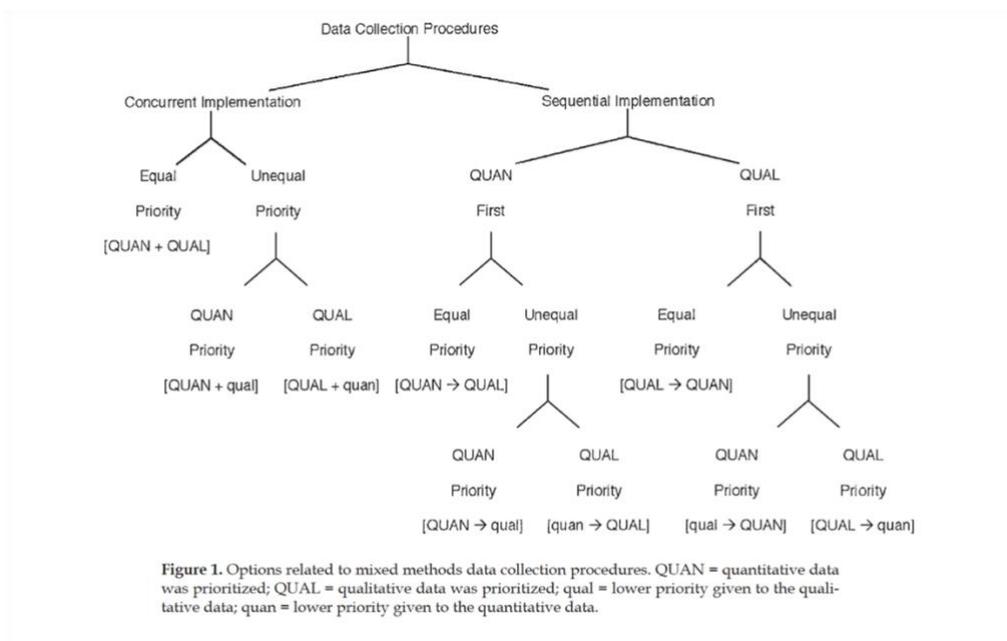
In summary, the use of a sequential explanatory design in this study was to initially generate information about facilitators and barriers toward the provision of reasonable adjustments (in phase one) to then guide the development of interview questions (in phase two) for an in-depth understanding of the issue (Creswell & Zhang, 2009). Therefore, the use of this design in this study, was not about seeking to confirm or reject a hypothesis, instead it was more about seeking in depth understanding of facilitators and barriers toward the provision of reasonable adjustments. This is in line the research aims and questions and Creswell et al. (2011) who emphasised that in an explanatory sequential design, the collection of qualitative data in phase two can help explain the collected quantitative data in phase one to assist understanding.

3.5 Data integration

In mixed methods studies, the integration of data is dependent on the order and priority of data being collected (Hanson et al., 2005). The order refers to the time in which the quantitative and qualitative data were collected (whether sequentially or concurrently), and the priority refers to the weight in which the quantitative and

qualitative data were given equal or unequal priority, as summarized in the next figure (Creswell et al., 2003; Morgan, 1998).

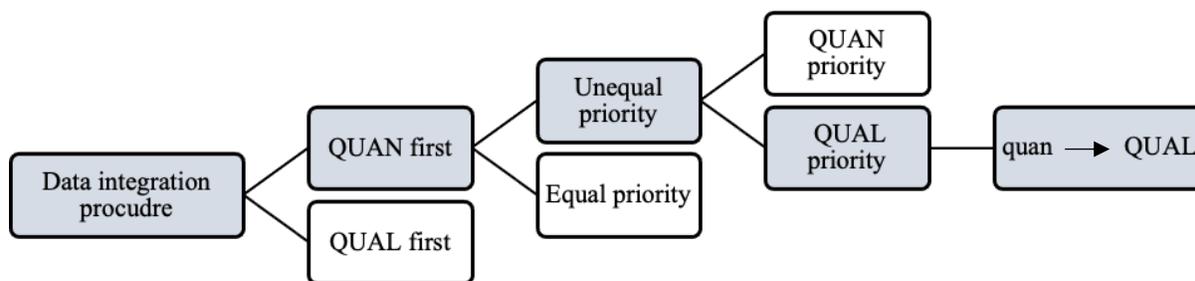
Figure 3. 2: Explanation of data integration in mixed method designs.



The source: adapted from Hanson et al., 2005.

This study used a sequential explanatory mixed methods design that collected data sequentially, with unequal priority given to qualitative data. That is, in this study more weight was given to the qualitative data, as demonstrated in the next Figure 3.3. The reason for giving more weight to qualitative data was because phase one was used as a tool to capture a snapshot of the issue, and the purpose of phase two was to recruit participants and develop interview questions for a more in-depth understanding of the issue.

Figure 3. 3: Explanation of the data integration and priority in this study.



The source: developed by the researcher.

3.6 Research Population and Participants

3.6.1 The Population of the Study

The population of the study is informed by the research questions and aims. As this study aimed to explore facilitators and barriers toward the provision of reasonable adjustments for students with learning disabilities at Saudi public universities, three groups were recruited. The population of the study consisted of faculty members, staff members at disability centres/units, and students with learning disabilities at Saudi public universities. Faculty members and staff members at disability centres/units were recruited regardless of their academic rank/qualification, gender, age, major(s), teaching experience, nationality, and university location. Students with learning disabilities who were registered at the disability centres/units at Saudi public universities were recruited regardless of their gender and age. Justification for focusing on these three groups, in particular, is discussed next.

3.6.2 Participants

Alongside addressing the research questions, I found that (during writing the literature review) faculty members, staff at disability centres/units and students with learning disabilities were highly relevant to the exploration of the provision of reasonable adjustments for students with learning disabilities in higher education. First, the understanding of learning disabilities among faculty members and their willingness to provide academic adjustments for students with learning disabilities play a major role in including those students in higher education (Murray & Wren, 2008). This can be seen from academic's attitudes (e.g., faculty members) toward students with learning disabilities, especially in Saudi Arabia where such attitudes are mainly negative, though in some cases positive, as the literature reports (Thuwaibi, 2009; Elsubaie, 2017). Second, it is critical to understand the experiences of students with learning disabilities regarding the provision of reasonable adjustments. This can be seen from the many studies that have examined the experiences of university students with learning disabilities regarding reasonable adjustments in other cultural contexts (e.g., see Lightner et al., 2012; Marshak et al., 2010). Finally, attitudes and expectations of non-academic staff (e.g., staff members at disability centres/units) who work directly with students with learning disabilities are important (Jensen et al., 2004). Taking the above points into account, these three groups were seen as valuable sources of information regarding facilitators and barriers to the provision of reasonable adjustments.

3.6.3 Sampling Schemes

Onwuegbuzie and Leech (2007) write that the researcher's sampling approach is determined by the researcher's aims whether seeking to generalise results to the population (in which, random sampling is used) or learning more about a phenomenon (in which, non-random sampling is used). As the study aimed to generate an in-depth understanding of facilitators and barriers toward the provision of reasonable adjustments, but not necessarily generalisable findings, non-probability sampling techniques were therefore used.

The selection of participants was based on the research aims and questions. It may be argued that non-probability sampling techniques are usually associated with the post-positivist researcher (e.g., qualitative research), not the quantitative researcher. However, it can be argued that probability and non-probability can be used in both quantitative and qualitative research (Onwuegbuzie & Collins, 2007). In other words, researchers can use random or non-random sampling to collect quantitative or qualitative data which best answers their research questions. In non-probability sampling techniques, the sampling is not based on randomization: instead, subjective approaches are utilised to determine which items are included in the sample, such as specialist knowledge, capacity, and willingness of the participants to share their experiences and attitudes (Eitkan et al., 2016; Rai & Thapa, 2015). In non-probability sampling, cases or units of participants are selected as they can provide a valuable source of information for the study.

In this study, if random sampling had been adopted, it would have been necessary to recruit staff and students with learning disabilities from all Saudi Public

universities and disability centres/units, (Noor et al., 2022), but this was impossible to achieve, because of access restrictions. Instead, it was important for the study to select specific representative cases/units to learn as much as possible about facilitators and barriers toward the provision of reasonable adjustments, to provide a better understanding of the issue. Based on the aims of the study, four sampling schemes were used (e.g., under non-probability sampling schemes) in phases one and two of the study as explained next.

3.6.4 Sampling and Selection Justifications:

3.6.4.1 Phase One: The Questionnaires

The first sampling technique I used was purposive sampling, which could be defined as a way of selecting people in who could provide meaningful data to the study (Thomas, 2017). This sampling technique was used with faculty members and staff members at disability centres/units. Regarding faculty members, as the study was targeted only at Saudi public universities, it was first necessary to locate Saudi public universities purposively. In Saudi Arabia, there are 12 private universities and 29 public universities which are both different in their education systems and policies (Ministry of Education, 2022). Private universities even though they operate under the Saudi Ministry of Education, are different in their policies and structures for public universities. For example, most private universities are paid universities, teach only in English, and focus only on specific subjects e.g., nursing, medicine, and business. Also, most of the conducted research on the inclusion of students with learning disabilities within the Saudi context was conducted in Saudi public universities (see Chapter Two, Table 2.2). Most of their recommendations were concerning Saudi public universities. Therefore, as the study followed up-to-date knowledge on this

topic (as shown in Chapter Two, Table 2.3), it was necessary to follow their recommendations and only target Saudi public universities to fill the gap and add to the existing knowledge regarding this topic.

Second, purposive sampling was also used to locate Saudi public universities that have disability centres/units. Before the start of data collection, it was not clear which universities in Saudi Arabia had disability centres/units and which did not. This is because the establishment of disability centres/units at Saudi public universities is still at an early stage and not all universities have disability centres or units (Bakri, 2019). This situation made it challenging for the study to locate universities with disability centres/units, however, this step was needed to ensure that data was being collected from participants with particular characteristics. To overcome this challenge, I searched the Saudi public universities' websites to find out which universities have disability centres/units. This stage also involved informal communication with Saudi public universities and disability centres/units to make sure this information was still up to date. After finishing collecting information about disability centres/units and students with learning disabilities, I found that out of 29 public universities only 8 universities had a disability centre or unit, as presented in the next table.

Table 3.1: Information about the number of disability centres and units at Saudi public universities at the time of the study.

Universities Locations	Number of universities	Universities have disability centres/units
North	5	1
South	5	2
Middle	9	3
West	7	2
East	3	0
Total	29	8

After locating universities and disability centres/units, I used two different sampling strategies to reach each group faculty members (group one) and staff members at disability centres/units (group two). Regarding faculty members, I used the snowballing sampling technique to approach faculty from different genders and university locations in Saudi Arabia. Snowballing is a sampling approach for detecting and sampling instances in a network. It starts with one or a few persons or cases and expands based on linkages to the initial cases (Dörnyei, 2007). Snowballing was used to recruit faculty members in different university locations (e.g., North, South, Middle, East, and West Saudi public universities). The education system in Saudi Arabia separates males and females in all phases of education, including higher education. This meant there was a need to contact female faculty members at all-female departments to help me forward the e-questionnaire (1) to other female faculty members to generate as many as possible. In doing so, a link to the questionnaire and the consent form alongside the information sheet (e.g., Section 3.8.1) were sent to faculty members using their WhatsApp groups, Twitter accounts, and emails. Then, each faculty member was asked to forward the link and the information sheet to WhatsApp groups or emails of their colleagues.

Regarding staff members at disability centres/units, after locating Saudi public universities that have disability centres/units purposively, I used convenience sampling to access staff members at those centres/units. Convenience sampling is a sampling strategy that targets participants who are available at the time of the study and willing to participate. As part of this strategy, a link to the e-questionnaire (2) and the consent form, along with the information sheet (as shown in Section 3.8.1), was emailed to the directors of the disability centres/units at Saudi public

universities (e.g., Jan 2022) to send to staff who were available and willing to participate at the time of the study. Out of 74 staff members at the disability centres/units at Saudi public universities, 44 staff members completed the e-questionnaire (2), which was more than half of the staff members at disability centres/units at Saudi public universities, as presented in Table 3.2.

Table 3.2: Information about the number of staff members at the disability centres/unit at Saudi public universities at the time of the study.

Locations	Number of disability centres/units	Number of staff	Gender	Filled the e-questionnaire
North Universities	1	4	Unknown	3
South Universities	2	7	Unknown	7
Middle Universities	3	45	12M - 33F	19
West Universities	2	17	7M - 10F	15
East Universities	0	0	0	0
Total	8	74	Unknown	44

3.6.4.2 Phase Two: The interviews

After completing data collection and analysis (e-questionnaires, phase one), I had to recruit participants (faculty members and staff members at disability centres/units') for phase two. In this step, I referred to the e-questionnaires (1 and 2) and made a list of the names of all participants (which was kept separately from the interview data) who agreed at the end of the e-questionnaires to take part in the interview (e.g., see the last part in both e-questionnaires). Out of 178 faculty members who completed the e-questionnaire (1), 36 (26 males and 10 females) voluntarily agreed to be interviewed. In addition, out of 44 disability centres/units' staff members who completed the e-questionnaire (2), 10 (4 males and 6 females) voluntarily agreed to be interviewed, as summarized in Table 3.3.

Table 3.3: The number about participants who voluntarily agreed to be interviewed.

Participants	Number	Gender	University location				
			North	South	Middle	West	East
Faculty members	36	Males	5	9	6	4	2
		Females	2	0	4	3	1
Disability centres/units' staff	10	Males	1	0	1	2	X
		Females	1	1	2	2	X

As shown in Table 3.3, I received a lot of requests for the interview and as I planned to do only 20 interviews, I had to make a selection from the participants who voluntarily agreed to take part in the interview. To do that, I divided participants in both groups (faculty and disability centres/units) into subgroups based on gender and university locations. This step ensured giving a voice to a wide range of participants, as well as capturing relevant information regarding the study's aims. After dividing the participants into subgroups, I used a typical case sampling technique to select participants from those subgroups. A typical case sampling technique is used when trying to establish 'typical' cases. Under typical sampling, participants are often picked based on their likelihood of acting similarly to the rest of the population (Eitkan et al., 2016). So, in this phase of the study (phase two), I planned to select participants purposively from each gender and university location assuming that each of them may give similar information to the rest of their group with similar characteristics.

It is worth mentioning that most of the interviews were conducted at the end of term 1 and the beginning of term 2 (Dec 2021 to Feb 2022) which was the time for term exams at Saudi public universities. It is fair to assume therefore that this was the main reason that half faculty members and staff members at disability

centres/units did not respond to confirm their interview date and time, so another participant was selected. Also, no disability centres/units were found at East universities at the time of the study. The final numbers of faculty members and staff members at disability centres/units' who were interviewed are summarised in the next table.

Table 3.4: The final number of faculty members and staff members at disability centres/units who were interviewed.

Participants	Number	Gender	University location				
			North	South	Middle	West	East
Faculty members	8	3 M	1	0	0	1	1
		5 F	1	0	1	2	1
Disability centres/units' staff	7	2 M	1	0	1	0	X
		5 F	0	1	2	2	X

Finally, regarding the students with learning disabilities, there was no phase one for this group of participants only phase two (the interviews). As mentioned above, it was not clear which Saudi public universities had disability centres/units and which disability centres/units had identified and registered students with learning disabilities due to a lack of published and written information in this regard. Therefore, I searched the Saudi public universities' websites to find out which universities have disability centres/units and again searched to find which of those disability centres/units have registered and identified students with learning disabilities. Out of the 8 disability centres/units, only three disability centres/units had students who were officially identified and registered as students with learning disabilities as presented in Table 3.5.

Table 3.5: Information about the number of disability centres and units at Saudi public universities at the time of the study.

Universities Locations	Number of universities	Universities have disability centres/units	Disability centres/units have registered students with LD
North	5	1	0
South	5	2	0
Middle	9	3	2
West	7	2	1
East	3	0	0
Total	29	8	3

After purposively locating disability centres/units that had registered and identified students with learning disabilities, I used a convenience sampling technique to reach those students. To do that, I emailed an electronic copy of the document that included the consent form and information sheet for phase two (e.g., see Section 3.8.2) to the directors of the disability centres/units (e.g., Jan 2022) to send to students with learning disabilities. Students who voluntarily agreed to take part were asked to read the information sheet and fill out the electronic consent form. It is worth mentioning that although I stated in the information sheet (phase two) that a shopping voucher of 200 rials (45 pounds) Saudi would be given to students with learning disabilities after completing the interview, only 5 out of the 20 students with learning disabilities who were officially identified and registered at different disability centres/units agreed to be interviewed by filling the e-consent form, as seen in Table 3.6.

Table 3.6: Information about the number of students with learning disabilities at the time of the study.

Locations	Disability centres/units have students with learning disabilities	Number of students	Gender	Response for the interview
North Universities	0	0	0	0
South Universities	0	0	0	0
Middle Universities	2	14	14F	5F
West Universities	1	6	1M – F5	0
East Universities	0	0	0	0
Total	3	20	3M – 19F	5F

3.7 Tools for Data Collection

As the study used a sequential explanatory mixed methods design (quantitative data followed by qualitative data), two types of data collection tools were used (questionnaires to collect quantitative data in phase one and an interview to collect qualitative data in phase two). The next section discusses the types, structures, and development of each data collection tool in detail.

3.7.1 Questionnaires

Questionnaires could be defined as a common data collection method used to gather information about people’s opinions and behaviours (Williams, 2003). This allows participants to express their beliefs and attitudes on the topic of interest (Teddlie & Tashakkori, 2009) and respond in any way they would like (Clark & Cresswell, 2014). Questionnaires also “can be effectively combined with different data collection methods such as interviews to provide more in-depth perspectives” (McGuirk & O’Neill, 2016, n.p.) This study used questionnaires to capture the understanding and beliefs about learning disabilities and reasonable adjustments held by faculty and staff members at disability centres/units. Furthermore, they were designed to generate information about their thoughts on capacity, interests, and

policy related to the provision of reasonable adjustments, as well as to capture their ideas about the level of collaboration between different departments in their universities.

3.7.1.1 Structure Stage of e-Questionnaires

As I explained in Chapter Two, Table 2.7, the research questions were shaped by the ecological systems theory. For instance, RQ2 and RQ3 were influenced by the Micro-system, which illustrates the immediate contexts in which the individual is involved and the relationships between people in the students' immediate environment e.g., faculty members, staff members at disability centres/units and their universities. Additionally, RQ4 and RQ5 were informed by the Exo-system, which represents the external influences on the individual from systems that are not directly related to their immediate environment. For instance, in this study, the exo-system refers to universities' capacity, resources, and policies regarding the provision of reasonable adjustments. Therefore, it was necessary to consider the ecological systems theory while developing both questionnaires as detailed below.

First, at the development stage, I considered the main findings of the literature review on the provision of reasonable adjustments as the sources for the items in both questionnaires. For example, the literature review indicated key ideas related to the provision of reasonable adjustments such as the understanding of learning disabilities and reasonable adjustments, broader beliefs of learning disabilities in higher education, interest in providing reasonable adjustments, as well as issues related to the policy of reasonable adjustments, university support, and collaboration between faculty members, and staff members at disability centres/units, and their

universities (e.g., see Abed & Shackelford, 2020; Alhossein, 2014; Elsubaie, 2018; Ryder and Norwich, 2019; Bakri, 2019; Al-Homaidhi, 2019; Alquraini, 2010; Binbakhit, 2020).

Second, I utilized the ecological system theory to organize and structure the key ideas in both questionnaires. For instance, Part II of both questionnaires covered key concepts related to the Micro-system (such as understanding learning disabilities and reasonable adjustments) and the Macro-system (e.g., the broader beliefs about learning disabilities). Part III included items related to the Exo-system, such as the collaboration between individuals in the Micro-system. Also, this part included items related to the Macro-system, which represents policies and allocated resources (e.g., policy, training, and professional development programs related to the provision of reasonable adjustments) e.g., see the below table.

Table 3. 1: The connection between the literature, the ecological model, and the questionnaires' structures.

Parts of the Questionnaires	The system (s) of the ecological model	Explanation the system (s) in the study	Key ideas of the literature related the system (s)
Part I of both questionnaires		Demographic information	
Part II of both questionnaires	Part II represents the Micro-system (which is the immediate context in which the individual learns and participates) and Macro-system (which is the broader cultural and social influence)	In this study, the Micro-system referred to the understanding of learning disabilities and reasonable adjustments by faculty members and staff at disability centres/units. The Macro-system in this study referred to broader cultural and social beliefs of students learning disabilities and their education.	<ul style="list-style-type: none"> • Knowledge of learning disabilities and reasonable adjustments (Bakri, 2019; Binbakhit, 2020; Ryder and Norwich, 2019) • Broader beliefs of learning disabilities (Bakri, 2019).
Part III and IV of both questionnaires	Parts III and IV represent the Meso-system (which is the relationship between factors of the micro-system) and the Exo-system (which is the external influences on the individual from systems not directly related e.g., policy and allocated resources).	In this study, the Meso-system referred to the issues related to the interactions between various factors e.g., university, faculty members, and staff members at disability centres/units. The Exo-system in this study referred to university' policy and allocated resources regarding reasonable adjustments.	<ul style="list-style-type: none"> • Collaboration and communication between faculty members, staff at disability centres/units, and their universities). • Absence of policy or ineffective policy (Al-Homaidhi, 2019; Alquraini, 2010; Binbakhit, 2020) • Limited resources e.g., financial, and informational resources (Alwabli, 2017) as well as human resources (Binbakhit, 2020).

The reason for developing two separate electronic questionnaires was that in each questionnaire, there were a few sections and items that were only developed

to target a specific group (either faculty members or staff members at disability centres/units). For example, questions 2, 7, and 8 under Part I was different in both questionnaires. Also, Part IV of questionnaire 1 (faculty members' questionnaire) included two sections (sections A and B), whereas the same part of questionnaire 2 included only one section, namely, section A. The reason for this was that section A (which was about the capacity for reasonable adjustments) targeted both faculty and staff members at disability centres/units, while section B (which was about exploring interest toward the provision of reasonable adjustments) targeted faculty members only.

3.7.1.2 Review Stage of e-Questionnaires

After developing and drafting all items in both questionnaires, both questionnaires were sent to the supervisors as a word document for review and comments. In the initial draft, a few comments were received from supervisors, such as deleting some items, as they were not redundant or repetition and suggesting adding some new items. A second draft was developed upon the suggestions on the initial draft and sent again to both supervisors for the final review. No significant suggestions were made on this draft, except for changes to the structure of the questionnaires where a few sections were organised in a different order for better understanding. The final draft was sent to one of the experts on learning disabilities at the University of Exeter to have their feedback on the questionnaires before converting them to electronic copies. No issues were found except for two statements that were paraphrased to become clearer, and a suggestion was made to use 4 points Likert scale instead of 5 which was adopted.

The final stage of developing the data collection tool for phase one was converting both questionnaires from hard copies to electronic versions using [Qualtrics](#). Qualtrics is a web-based software that allows users to create surveys and generate reports without any previous programming knowledge. Qualtrics was used as it provided a variety of distribution means that facilitated the distribution of e-questionnaires to the participants. Another advantage is that it also supports both Arabic and English, which was important for the study, as Arabic was the participants' first language. The first copies of the questionnaires were converted into English and electronic links were sent to supervisors for review and comments. As both copies looked good, I translated both copies from English into Arabic using the translation tool provided by Qualtrics. Then, after completing the translation stage, I referred to a PhD student who was studying linguistics at the University of Exeter to make sure that the translation was accurate, and that the translation process has not negatively affected the meaning of questions and items in each questionnaire.

3.7.1.3 Testing Stage of the e-Questionnaires

After completing the development stage, it was important to make sure the questionnaires can be easily read and understood by participants, so that a pilot study was conducted. Two electronic links to the e-questionnaires were sent to participants using their emails and phone numbers. Questionnaire one was sent to 20 faculty members (12 males and 8 females) and questionnaire two was sent to staff members at two disability centres/units (1 male and 1 female). The staff members at disability centres/units and most of the faculty members reported positive feedback and more particularly that both questionnaires were

understandable, and items in each questionnaire were clear to them. Several faculty members (e.g., 6 faculty members) gave detailed feedback on some items, as outlined in Table 3.8.

Table 3. 2: Faculty’s feedback about the questionnaire and items of the pilot study.

Participants	Total Number	Participants’ notes	The researcher’s response
Faculty members	6	One participant mentioned that the term “high exception” was not clear.	I used this item instead “I expect that students with learning disabilities will be very successful in higher education”.
		One participant mentioned that Part 2 item 2 is more specialised and not all faculty members might understand it.	No response.
		3 participants mentioned ‘why you are combining two options together’. (No and I don’t know). ‘Do you just care about people who will say ‘yes’? if not, it is better to have three options (yes-no-I am not sure’).	I responded with that I added “not sure” choice to yes and no questions in Part 1.
		2 participants mentioned that “not sure” should be placed in the middle on five-point scale	I used 5-point scale instead of 4 points, for example, I used (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.
		One participant mentioned that Part 1 item 9 should be only about students with learning disabilities.	I replaced this item with that (Have you received any training-related provision of additional support to students with learning disabilities?)

3.7.1.4 Revision and Finalisation of the Electronic Questionnaires

Before sending the electronic questionnaires to participants, questionnaires were given a final review to consider participants’ feedback from the pilot study and correct any translation errors. The final draft of the faculty members’ questionnaire (see Appendix Six or [the e-link](#)) included four parts consisting of 61 items. Part I included 10 items that collected demographic information such as age, gender, academic rank, and university location (South, North, West, East, or Middle of Saudi Arabia). Part II included 13 items that captured faculty members’ knowledge of

learning disabilities (items 1 to 5), knowledge of reasonable adjustments (items 6 to 9), as well as their broader beliefs concerning learning disabilities (items 10 to 13). Part III included 9 items that explored the collaboration of disability centres/units with faculty members (items 1 to 5) and collected information regarding the policy of the provision of reasonable adjustments (items 6 to 9). Part IV consisted of two sections A and B. Section A included 14 items that explored the capacity and availability of resources for the provision of reasonable adjustments at Saudi universities. Section B included 15 items that captured the interest of faculty members toward the provision of reasonable adjustments.

Similarly to the faculty's questionnaire, the questionnaire for staff members at the disability centres/units (see Appendix Six or [the e-link](#)) included four parts consisting of 46 items. Part I included 10 items that collected demographic information such as age, gender, qualification, major(s), and university location (South, North, West, East, or Middle of Saudi Arabia). Part II presented 13 items that captured the knowledge of learning disabilities (items 1 to 5), knowledge of reasonable adjustments (items 6 to 9), as well as their broader beliefs on learning disabilities (items 10 to 13). Part III presented 15 items that explored the collaboration of faculty members with disability units/centres (items 1 to 5), the collaboration of Saudi universities with their disability units/centres (items 7 to 11), and collected information regarding the policy for the provision of reasonable adjustments (items 12 to 15). Part IV included 14 items that explored the capacity and availability of resources for the provision of reasonable adjustments at Saudi universities.

3.7.2. Interview

In phase two of the study, online semi-structured interviews were conducted with three groups of participants (faculty members, staff members at disability centres/units, and students with learning disabilities). Before explaining what semi-structured interviews are, it is important to note that the original plan to conduct face-to-face interviews with participants had to be changed due to Covid-19. As a result, the interviews were conducted online through Microsoft Teams. Interviews are the most prominent data collection method in qualitative research and one of the most influential ways of exploring people's perceptions (Punch, 2009). Interviews can be either structured, unstructured, or semi-structured (Punch & Oancea, 2014; Robson, 2011; Thomas, 2017). For example, a structured interview may be used when the researcher focuses on studying evidence, while an unstructured interview could be used when a study focuses on meaning (Qu & Dumay, 2011). In structured interviews, the questions are predetermined by the researcher, while in an unstructured interview there are no predetermined questions to open the conversation between the researcher and interviewee (Thomas, 2017). This study used semi-structured interview questions to dig deeper for critical comments and to develop a clearer picture (De Vos et al., 2011) of facilitators and barriers toward the provision of reasonable adjustments. Both predetermined and non-predetermined questions were included to allow for flexibility in the interview process and give participants the freedom to talk (Hesse-Biber & Leavy, 2011). The next section discusses the structure and development of the semi-structured interviews in more detail.

3.7.2.1 The Structure and Development Stage

The structure and development of interview questions for faculty members and staff members at disability centres/units were guided by the research questions, aims, and the initial analysis of questionnaires one and two. In the beginning, I developed some questions related to the research questions/ aims of the study, for example, questions related to the understanding of learning disabilities and reasonable adjustments, the policy about reasonable adjustments, interest in the provision of reasonable adjustments, as well as questions related to facilitators and barriers toward the provision of reasonable adjustments. Then, upon the initial analysis of quantitative data, these questions were further refined to explain some of the findings related to phase one and allow for more understanding of facilitators and barriers toward the provision of reasonable adjustments. For instance, I paid more attention to findings such as the lack of disability training related to reasonable adjustments, uncertainty about the existence of a reasonable adjustments policy, and uncertainty about the presence of disability centres/units. Some specific questions included, "Are you aware of the existence of disability centres/units at your university? If yes, why? If not, why?" and "Are you aware of the existence of reasonable adjustments policy at your university? If yes, why? If not, why?" Other focused questions addressed the lack of disability training related to the provision of reasonable adjustments, such as "What type of training do disability centres/units expect from their universities? The next tables 3.9 and 3.10 presented an example of interviews' questions, a full table of the interviews' questions could be found in Appendix Seven.

Table 3. 3: The structure and development of the semi-structured interview questions for faculty members and disability centres/units staff members.

Research questions	Interview Questions
1. How do students with learning disabilities, faculty and staff members at disability centres/units describe the provision of reasonable adjustments at Saudi public universities?	There was no phase one for this question, only interview (phase two).
2. How do faculty and staff members at disability centres/units understand the terms learning disabilities and reasonable adjustments in Saudi public universities?	<ol style="list-style-type: none"> 1. What do learning disabilities mean to you? 2. What do you think is the meaning of the term 'reasonable adjustments'? 3. Do you use this term or a different term in your department? If yes, why? 4. With regards to this term, what do you think counts as a reasonable or an adjustment?
3. To what extent and in what ways are faculty members interested in the provision of reasonable adjustments to students with learning disabilities in Saudi public universities?	<ol style="list-style-type: none"> 5. How would you describe the provision of reasonable adjustments in your department? 6. Would you be interested in providing reasonable adjustments for your students? if yes, why? 7. What about your colleagues, do you think they are interested?
4. How do faculty and staff members at disability centres/units describe the capacity and availability of resources regarding the provision of reasonable adjustments in Saudi public universities?	<ol style="list-style-type: none"> 8. What is the capacity and availability of resources in your university regarding the provision of reasonable adjustments? 9. Do you have a disability centre or unit in your university? If yes, questions A, B & C apply. <ol style="list-style-type: none"> A. To what extent do you think it is useful to have a disability centre or unit in your university? Justify your response. B. Have you received any training with regards to reasonable adjustments from the disability centre or unit in your university? C. If yes, what kind of training? To what extent, was it useful/ relevant? <p>To what extent do you think staff are aware of the provision offered by disability centres or units in your universities? Justify your response.</p>
5. What are the perspectives of students with learning disabilities, faculty, and staff members at disability centres/units about reasonable adjustments policies at Saudi public universities?	<ol style="list-style-type: none"> 10. Are you aware of your institution's policy regarding the provision of reasonable adjustments? 11. Is there a policy in your university with regard to reasonable adjustments? if yes, 17 apply, if no, 18. 12. To what extent is this policy useful? Why? (If there is a policy). 13. Do you think that a policy would be needed? If yes, what should this policy look like?
6. What are the facilitators and barriers that students with learning disabilities, faculty and staff members at disability centres/units recognise with regards to the provision of reasonable adjustment at Saudi public universities?	<ol style="list-style-type: none"> 14. Do you think there is sufficient awareness about the availability of disability centres and units in Saudi universities? If yes, why? If not, why? 15. Do you have a disability centre or unit in your university? If yes, questions A & B applied. <ol style="list-style-type: none"> A. Do you think the disability centre or unit staff members in your university are collaborative? If yes, why? If not, why? B. Have you received any training in regard to reasonable adjustments from the disability centre/unit in your university? If yes, why? If not, why?

Table 3. 4: The structure and development of the semi-structured interview questions for the staff members at disability centres/units.

Research questions	Interview Questions
1. How do students with learning disabilities, faculty and staff members at disability centres/units describe the provision of reasonable adjustments at Saudi public universities?	There was no phase one for this question, only interview (phase two).
2. How do faculty and staff members at disability centres/units understand the terms learning disabilities and reasonable adjustments in Saudi public universities?	<ol style="list-style-type: none"> 1. What do learning disabilities mean to you? 2. What do you know about the reasonable adjustments? 3. Do you use this term or a different term in your department? If yes, why? 4. With regards to this term, what do you think counts as a reasonable or an adjustment?
3. To what extent and in what ways are faculty members interested in the provision of reasonable adjustments to students with learning disabilities in Saudi public universities?	This question was only addressed for faculty members.
4. How do faculty and staff members at disability centres/units describe the capacity and availability of resources regarding the provision of reasonable adjustments in Saudi public universities?	<ol style="list-style-type: none"> 5. Do you think there are enough capacity and availability of resources in your university regarding the provision of reasonable adjustments?
5. What are the perspectives of students with learning disabilities, faculty, and staff members at disability centres/units about reasonable adjustments policies at Saudi public universities?	<ol style="list-style-type: none"> 6. Do you think the policy of reasonable adjustments in your disability centre/unit is effective? If yes, why? If not, why?
6. What are the facilitators and barriers that students with learning disabilities, faculty and staff members at disability centres/units recognise with regards to the provision of reasonable adjustment at Saudi public universities?	<ol style="list-style-type: none"> 7. What type of support do you think staff members at disability centres/units needs from their universities regarding the provision of reasonable adjustments? 8. Have you received any training in regard reasonable adjustments from your university? If yes, why? If no, why? 9. Are there enough staff members in your disability centre/unit who are experts in learning disabilities? If no, why? 10. Most participants in phase one strongly believed that there are students with learning disabilities in their universities; however, the actual number of these students is very low in Saudi universities. Why do you think that is?

3.8 Data Collection Procedure

This study included two methods of data collection: e-questionnaires (phase one) and semi-structured interviews (phase two). Before the actual data collection procedures for phases one and two, I developed two separate consent forms and information sheets for phases one and two of data collection. This was because the study used two different types of data collection methods, which required different

data collection procedures and consent forms following data collection ethical procedures stated by the University of Exeter. Both consent forms and information sheets for phases one and two were written in Arabic and English to allow flexibility and consider the language used by the participants (e.g., see Appendix Three and Four).

3.8.1 Phase One

For phase one (e-questionnaires), I developed an information sheet and consent form using the online forms provided by the University of Exeter. The sheet (as shown in Appendix Three) explained the purpose and nature of the study, the possible advantages/disadvantages of taking part and how collected data would be used (e.g., data will be used to fulfill the requirements of my PhD degree, participate in conference presentations, and to publish journal articles). Also, the information sheet clarified that participation is completely voluntary and that participants can withdraw from the study at any time, that their data will be treated in the strictest confidence and will not be disclosed to any unauthorised third parties. Alongside the information sheet, a consent form was developed (e.g., see Appendix Four or [the e-link](#)) which included general information about the study, participation, data, and Qualtrics as a web-based software. A copy of the consent form was attached to the questionnaires on the first page and participants could not open the questionnaire until they read the consent form and agreed to take part.

I started collecting quantitative data through e-questionnaires by writing a short message to the participants that introduced me, the name of the study, the purpose of data collection, and the method of data collection. I attached a link to the e-

questionnaire (1) and a PDF copy of the information sheet (phase one) with the short text and sent it to faculty members using their emails, phone numbers, and social media accounts. Also, faculty members were gently asked to forward emails or texts to other faculty members at their department or college. The aim of this was to generate as many responses as possible from faculty members as it was impossible, to access all faculty members at all university locations at Saudi public universities. A similar procedure was used with e-questionnaire 2 (staff members at disability centres/units) where the directors of the centres and units were the main point of contact. I emailed them a link to the e-questionnaire (2) alongside the information sheet, the information about me (the researcher) and the study. Every week for three weeks, I gently reminded participants to complete or fill out the questionnaires if they had not done so yet.

After about a month of starting to collect quantitative data using the e-questionnaires, I met with my supervisors to discuss the total number of received responses for each questionnaire. For questionnaire one (faculty members' questionnaire), a total of 272 questionnaires were received, and a total of 178 questionnaires were completed (65%). For questionnaire two questionnaire for staff members at disability centres/units) a total of 57 questionnaires were received, and a total of 44 questionnaires were completed (77%). As a good number of complete questionnaires were received, I decided with my supervisors to close both questionnaires. The reasons for deciding to close both e-questionnaires were firstly, because the first 44 responses represented more than half of disability of staff members at centres/units at Saudi public universities. Secondly, 178 faculty members' responses were seen as sufficient information to develop questions for

phase two. After stopping receiving responses from both questionnaires, I removed uncompleted questionnaires and downloaded an excel sheet from Qualtrics for each questionnaire for the initial analysis. Each excel sheet was transferred for the final data analysis to the Statistical Package for the Social Sciences (SPSS) version 28.0.0.0 (190) licensed by the University of Exeter.

3.8.2 Phase Two

For phase 2 (interview) an electronic form was developed using the online form provided by the University of Exeter which included the information sheet and consent form (e.g., see Appendix Five or [the e-link](#)). The information sheet explained why the research is conducted, the number of participants needed for the interview (5 to 10 participants from each group), what involves taking part, and the possible benefits or risks of participation. Participants were also informed about their rights regarding participation, withdrawal, data collection, audio recording, and what will happen to their data after data collection. At the end of the electronic form, participants were asked to give their consent for participating in the study and select a time and date for the interview, as well as provide contact details which were kept separately from the interview data.

Upon the initial analysis of phase one (e-questionnaires), I prepared the interview questions for phase two and made a list of participants who voluntarily agreed to take part in the interview at the end of each e-questionnaire (e.g., see the last question in both questionnaires). I divided the number of participants who agreed to participate based on their university locations (South, North, Middle, East, and West universities) and gender (males and females). As I mentioned above (See

Section 3.6.4), the reason for doing that was to give voice to participants from different university locations and genders. I sent emails (e.g., Jan 2022) to participants thanking them for considering taking part in phase two of the study with a link to the electronic form (phase two) to read the information sheet and fill out the consent form. After receiving their agreements and consent forms, I scheduled a meeting via Microsoft Teams based on the time and data they suggested during completing the consent form. At the beginning of each interview, I introduced myself again to the participants, explained the purpose of the interview, and asked permission to audio-record the interview for data analysis. Recordings were audio only (there was no video recording), and each interview lasted between 45 minutes and one hour.

With regards to collecting qualitative data from the third group (students with learning disabilities), I emailed the directors of the disability centres/units the e-link to the consent form and information sheet phase two to ask students with learning disabilities whether they would like to participate in a short interview. Students who voluntarily agreed to take part were asked to read the information sheet and fill out the consent form. Five female students with learning disabilities, with an official diagnosis, responded and were informed about the purpose of the interview, the audio recording arrangements, and that they could stop the interview at any point. The students' interviews were also conducted via Microsoft Teams and each interview lasted about 35 minutes. All participants in the three groups were informed that the audio recording of the interview was about to be deleted after transcription. All participants were assigned a code, for example, Student 1, Faculty 1, Staff 1, etc. to ensure anonymity and confidentiality.

3.9 Data Analysis Procedure

It is important to note that the data analysis in phase one was not explicitly guided by Bronfenbrenner's Ecological System Theory. Instead, the data analysis in phase one was based on descriptive analysis, while in phase two, I used Braun and Clarke's (2006) approach. However, this does not mean that Bronfenbrenner's Ecological System Theory was completely absent from the analysis. In fact, it can be argued that the ecological system theory was integrated into the data analysis. As mentioned earlier, the structure of data collection methods in both phases one and two was influenced by the research questions and Bronfenbrenner's Ecological System. Additionally, the organization and structure of data analysis (e.g., the themes and subthemes), particularly in phase two, were based on the research questions, which in turn were informed by the ecological system theory. Therefore, it can be argued that Bronfenbrenner's Ecological System Theory was not explicitly used as a framework during data analysis, but rather it informed my way of thinking when analysing and organising the data. Details of the data analysis in phases one and two can be found below.

3.9.1 Quantitative Data Analysis

The data from both questionnaires were downloaded from Qualtrics and were transferred to SPSS for final analysis. In this stage of analysis, the study's aims informed the choice of the type of analysis for phase one which was a descriptive analysis. The reason for using descriptive analysis was that first the study aimed at this stage of data collection to capture participants' ideas about learning disabilities and reasonable adjustments, as well as their perspectives on policy, collaboration, capacity, and interest toward the provision of reasonable adjustments. The goal of

the study was not to measure participants' attitudes, but rather it aimed (e.g., in phase one) to explore the ideas and perspectives of the participants to generate information that helped in developing questions for phase two that explored more deeply the facilitators and barriers toward the provision of reasonable adjustments. Each item in both e-questionnaires was itemised individually during the analysis using frequencies and percentages for each item.

3.9.2 Qualitative Data Analysis

At the stage of analysis, I applied Braun and Clarke's (2006) six phases of the thematic analysis approach. The thematic analysis is known as "a method for identifying, analyzing, and interpreting patterns of meaning (themes) within qualitative data" (Clarke & Braun, 2015, p.297). This involves six phases: becoming familiar with the data, generating initial codes, searching for themes, reviewing themes, defining themes, and writing up (Maguire & Delahunt, 2017). The thematic analysis can help in identifying "patterns within and across data in relation to participants' lived experiences, views and perspectives, and behaviour and practices; 'experiential' research which seeks to understand what participants think, feel, and do" (Clarke & Braun, 2015, p. 297). Also, the thematic analysis approach allowed the researcher to conduct an indicative and deductive analysis driven by the data itself, as well as the research questions (Maguire & Delahunt, 2017).

In the interviews (phase two) analysis, I started by reading and re-reading the written transcripts several times to get familiar with the data. Then I developed initial codes which were driven by the research questions to capture the interesting ideas related to my research questions. Some of those ideas were, for example, the

“concept of learning disabilities”, the “concept of reasonable adjustments”, “examples of what is reasonable/unreasonable”, “interest in the provision of reasonable”, “capacity”, “availability of resources”, etc. This step was done through Microsoft Word using the Comment feature. Next, I organised codes into broader themes that appeared to correspond to the areas captured by my research questions (Maguire & Delahunt, 2017), as well as emerging themes. In the fourth step of qualitative data analysis, I reviewed, modified, and reorganised themes/subthemes to make sure that themes/subthemes made sense, and that the data were relevant to each theme. At this stage, a few themes/subthemes were re-named, and some subthemes were moved and re-ordered and this process gradually produced a coherent set of data. In the final stage of the thematic analysis approach, I refined themes/subthemes to clarify what each theme and subtheme was about and connected themes and subthemes to the research questions. It is worth mentioning that data that were not relevant to the research questions were analysed too and organised into subthemes under “emerging themes”. Again, I used all steps of Clarke & Braun's (2015) thematic analysis with “emerging themes”, except that the analysis was not guided by the research questions, but instead it was more driven by the data itself.

3.10 Ethical Considerations

The term “ethics” refers to “the moral principle and guiding conduct held by a group or even a profession” (Wellington, 2015, p. 113.). Thus, ethical issues must be considered, before, during and after the lifetime of the research project, especially when conducting research that involves gathering data from people and about people (Punch & Oancea, 2014). Before the beginning of data collection of this

research study, ethical approval was sought first from the University of Exeter's Research Ethics Committee (See Appendix One). Upon the ethical approval from the University of Exeter, I submitted several ethical applications to the Deanship of Graduate Studies and Scientific Research at a few Saudi public universities and two universities requested additional ethical approvals (See Appendix Two). At this stage, I completed the ethical applications provided by these universities and attached a copy of the research proposal, the information sheet, and the consent form for each phase of data collection (quantitative and qualitative data). All the supporting documents attached to the ethical applications were translated from English into Arabic to allow review by Arabic native speakers at Saudi public universities.

In the second stage of data collection (e.g., during the actual data collection phases one and two), I used ethical approvals (from the University of Exeter and the two Saudi public universities) to gain access to participants. After getting permission to access the Saudi public universities, I sent a copy of the information sheet, the consent form, and an electronic link to the questionnaires (phase one), to all potential participants (faculty members and staff members at disability centres/units). The information sheets and consent forms explained the nature of the study and the right not to take a part in the study (Beauchamp & Childress, 2001). In the second phase of data collection (qualitative data), I sent another information sheet and consent form developed specifically for collecting qualitative data. The information sheet explained the purpose of the study, the process for the interviews about to be held, and what the interview would be about. Moreover, at this stage of data collection, issues related to the nature of Saudi society were considered. In Saudi Arabia males

and females are educated separately in all phases of education, including higher education. This was critical in the second phase of data collection (interviews) because females in Saudi Arabia might prefer not to be interviewed face-to-face by males. This issue was considered during the development of the data collection method as the information sheet (phase two) explained that interviews will be only audio and there was no need for participants to show their faces to ensure their privacy.

After the data collection, I used One Drive, a cloud service provided by the University of Exeter to store the data. All the data from all research methods including electronic questionnaires and interviews was saved directly to the researcher's private space in the University's systems which are password protected. For example, the audio recordings were downloaded from Microsoft Teams and uploaded to the University's One Drive server through a secure laptop using codes, such as Student 1, Faculty 1, Staff 1, etc., to ensure the privacy of the participants.

3.11 Summary of the Chapter

This chapter aimed to discuss the philosophical assumptions and the methodology for the study. The chapter also discussed the study's recruitment strategies, participants, data collection and analysis methods, and ethical concerns. The next chapter will present the quantitative and qualitative findings organised under two sections: section one presents the quantitative findings and section two presents the qualitative findings.

Chapter Four: Data Analysis and Results

4.1 Introduction

As stated in previous chapters, this research aimed to identify factors (facilitators and barriers) that influence the provision of reasonable adjustments for students with learning disabilities in Saudi public universities. To achieve the purpose of the study, a sequential mixed method design consisting of two phases of data collection was used. In Phase one, two separate online questionnaires (developed by the researcher and administered using Qualtrics) were used to collect quantitative data from faculty members, and staff members at disability centres/units at Saudi public universities; regardless of their academic rank/qualification, gender, age, major(s), experience, or nationality. In the second phase, semi-structured interviews were designed and conducted to collect qualitative data from some Phase one participants: faculty members and disability centre/units' staff members, as well as students with learning disabilities at public Saudi universities. The students recruited for phase two were those who were officially identified as having learning disabilities and were registered at disability centres/units in Saudi public universities. Furthermore, as the Saudi education system segregates males from females, it was essential to seek the view of both male and female participants (Arishi, 2020). The presentation of the data analysis is divided into two sections: Section One presents the quantitative data and Section Two the qualitative data.

4.2 Section One: Quantitative Data

4.2.1 Questionnaires' Design, Number of Responses and Scoring.

The faculty members' questionnaire consisted of four parts:

Part I - Demographic information This included 10 items that collected demographic information such as age, gender, academic rank, and university location (i.e., south, north, west, east or middle of Saudi Arabia).

Part II - Knowledge and understanding of reasonable adjustments for learning disabilities as well as broader beliefs about learning disabilities. This part included 13 items that captured faculty members' ideas about learning disabilities (items 1 to 5) and reasonable adjustments (items 6 to 9), as well as their broader beliefs about learning disabilities (items 10 to 13).

Part III - Factors related to the provision of reasonable adjustments. This part included 9 items that explored the collaboration of disability centres/units with faculty members (items 1 to 5) and collected information regarding the policy on the provision of reasonable adjustments (items 6 to 9).

Part IV was divided into two sections: Section A consisted of 14 items that explored faculty's perspectives on capacity and the availability of resources for the provision of reasonable adjustments at their respective Saudi public universities, while Section B consisted of 15 items that captured their level of interest in the provision of reasonable adjustments.

Similar to the faculty's questionnaire, the disability centre/unit staff members' questionnaire consisted of four parts which collected the same information with a few exceptions:

Part I included 10 items that collected the same demographic information stated above but used the term 'qualification' instead of 'academic rank'.

Part II included 13 items, the same as for faculty members, and captured their ideas about learning disabilities (items 1 to 5), reasonable adjustments (items 6 to 9), as well as broader beliefs on learning disabilities (items 10 to 13).

Part III was different from the faculty questionnaire and included more items i.e., items 7 to 11. Therefore, items 1 to 5 explored the collaboration of faculty members with disability centres/units, and items 7 to 11 explored the collaboration of Saudi universities with their disability centres/units, and items 12 to 15 collected information regarding the policy of the provision of reasonable adjustments.

Part IV included only one section (Section A) which explored the capacity and availability of resources to the provision of reasonable adjustments at Saudi universities through 14 items as for faculty members. Section B (the level of interest in the provision of reasonable adjustments) was not included in this questionnaire as it only targeted faculty members.

Regarding collection methods and the number of responses, two separate e-links to questionnaires one and two were sent to faculty and disability centre/unit staff members by email. Also, some participants were reached through their social media accounts (e.g., WhatsUp and Twitter) using the same electronic links. Faculty members and staff members at the disability centres/units were asked politely to forward the questionnaire links to their colleagues to generate as many responses as possible. As explained in Chapter three (see Section 3.6.4), the Saudi education system separates men and women and thus there was a need for some help in the

female departments with forwarding the questionnaires to their colleagues. Besides, as I targeted faculty members from different university locations (North, South, Middle, East and West Saudi public universities), there was a need to have a wide network of people to help me reach different faculty members from different locations.

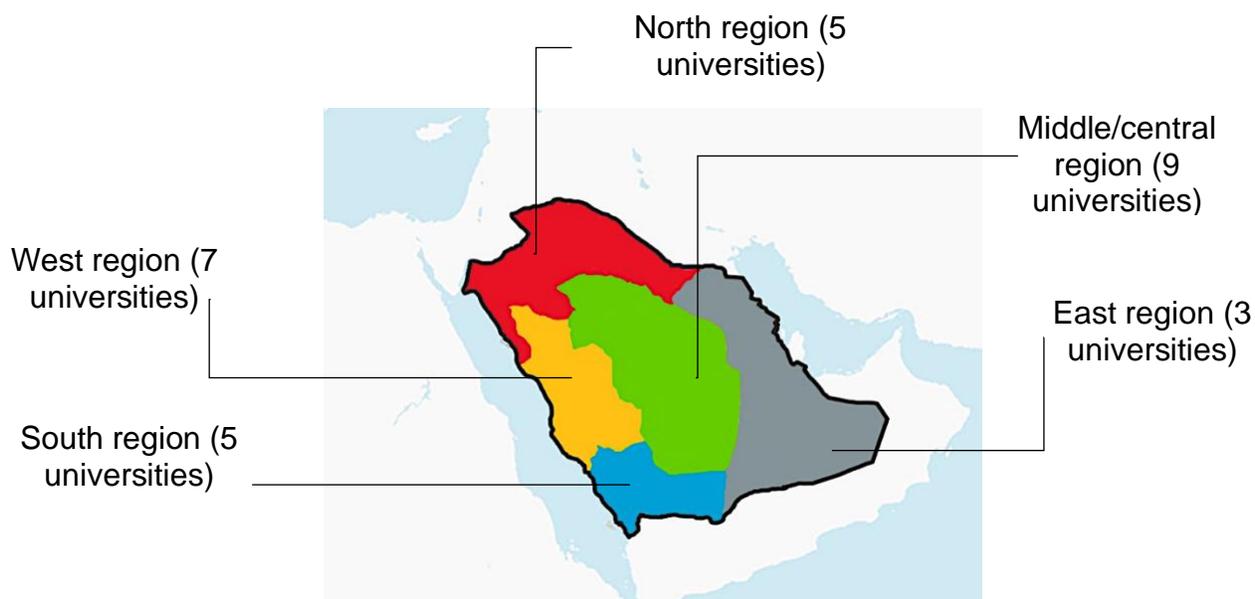
Regarding responses, for the faculty questionnaire, 272 questionnaires were received, of which 178 questionnaires were fully completed (65%). For questionnaire two (the disability centre/unit staff questionnaire), 57 questionnaires were received, of which 44 questionnaires were fully completed (77%). Regarding data analysis, both questionnaires were analysed using SPSS version 28.0.0.0 (190) licensed by the University of Exeter. The aim of both questionnaires was also to generate information which was used later to develop the interview questions for in-depth understanding of the research problem. A descriptive analysis was used in this phase (Phase 1). Lastly, all items in both questionnaires used a 5-point Likert scale: (1) Strongly disagree; (2) Disagree; (3) Not sure; (4) Agree and (5) Strongly agree. The only exception was that Section B of Part IV of the faculty questionnaire used a 5-point Likert scale with different terms: (1) Not interested; (2) Slightly interested; (3) Not sure; (4) Somehow interested and (5) Very interested).

4.2.2 Part I: Demographic Information

Part one of both questionnaires asked questions about characteristics such as gender, academic rank/qualification, and university location. The use of the university location instead of the university name in this study was to ensure the participants' anonymity. Moreover, each region of Saudi Arabia included more than

one university, which was to also ensure that participants could not be identified (see *Figure 4.1*).

Figure 4. 1: Regions of the Kingdom of Saudi Arabia and the number of public universities.



4.2.2.1 University Locations

Item 1 on each questionnaire was about the university location. On the faculty's questionnaire, 28.1% (n=50) of faculty members were from southern universities, 28.1% (n=50) were from middle/central universities and 6.2 % (n=11) were from universities in the eastern region. In comparison, on questionnaire two, 43.2% (n=19) of staff members at disability centre/unit were from universities located in the middle and 34.1% (n=15) were from the western region; while no participants were from eastern region universities (n=0, 0.0%). This was expected, as during my informal communication with Saudi public universities (Table 10, p. 91 Chapter 3), I found that there were no disability centres/units in this region at the time of the study. Next tables show full responses to item 1 in both questionnaires.

Table 4. 1: Faculty members' responses to Item 1 in Part I of their questionnaire

Universities' location	Frequency	Percent	Cumulative percent
North	20	11.2	11.2
South	50	28.1	39.3
Middle	50	28.1	67.4
West	47	26.4	93.8
East	11	6.2	100.0
Total	178	100.0	

Table 4. 2: Staff members' responses to Item 1 in Part I of their questionnaire

Universities' location	Frequency	Percent	Cumulative percent
North	3	6.8	6.8
South	7	15.9	22.7
Middle	19	43.2	65.9
West	15	34.1	100.0
East	0	00.0	
Total	44	100.0	

4.2.2.2 Academic Rank/Qualification

On item 2, faculty members were asked to disclose their academic rank and were given five choices: Lecturer (Master), Assistant Professor, Associate Professor, Professor and Other. The choice of 'Other' was used to identify participants who had other academic ranks such as teaching assistant. Over half of the faculty members who responded to the questionnaire were lecturers (n=131, 73.6%) (see Table 4.3).

Table 4. 3: Faculty members' responses to Item 2 in Part I of their questionnaire

Academic Rank	Frequency	Percent	Cumulative percent
Lecturer (Master)	131	73.6	73.6
Assistant Professor	34	19.1	92.7
Associate Professor	1	.6	93.3
Professor	0	0.0	0.0
Other	12	6.7	100.0
Total	178	100.0	

Staff members at disability centres/units were also asked to specify their qualifications and area of specialisation using their questionnaire. With regards to qualifications, they were given six choices to choose from PhD, Master, Bachelor, Diploma, Certificate and Other. Half of the disability centre/unit staff members held a bachelor's degree (n=22, 50.0%) and only a few (n=5, 11.4%) staff at disability centres/units held a PhD degree as seen in Table 4.4.

Table 4. 4: Staff members' responses to Item 2 in Part I of their questionnaire

Academic Rank	Frequency	Percent	Cumulative percent
PhD	5	11.4	11.4
Masters	9	20.5	31.8
Bachelors	22	50.0	81.8
Diploma	4	9.1	90.9
Certificate	4	9.1	100.0
Other	0	0	
Total	44	100.0	

Regarding the area of specialisation, staff members at disability centres/units were asked to specify their major(s) on item 3 in their questionnaire. The aim of this was to understand if disability centre/unit staff members were or were not specialized in special education. The result was surprising as only 29.6% (n=13), had specialized in special education while 70.4% (n=31) specialized in different areas e.g., Islamic studies.

Table 4. 5: Staff members' responses to Item 3 in Part I of their questionnaire.

Area of Specialisation	Frequency	Percent	Cumulative percent
Special education	13	29.6	
Other	31	70.4	
Total	44	100.0	

4.2.2.3 Gender

Out of 178 faculty members, slightly over half were male (n=100, 56.2%) and the rest were female (n=78, 43.8%). This is likely because there are generally fewer female faculty members at Saudi universities (see Table 4.6).

Table 4. 6: Faculty members' responses to Item 4 in Part I of their questionnaire.

Gender	Frequency	Percent	Cumulative percent
Male	100	56.2	56.2
Female	78	43.82	100.0
Total	178	100.0	

By contrast, in questionnaire two (for disability centre/unit staff), slightly over three-quarters (n=34, 77.3%) were female and the rest (n=10, 22.7%) were male. That was due to two reasons, one was that during my formal communication with disability centres/units for data collection, I found that the number of female staff outnumbered male staff (which is the opposite from faculty members). Secondly, during both the survey and the interviews, women were more willing to participate than men (see Table 4.7).

Table 4. 7: Staff members' responses to Item 5 in Part I of their questionnaire.

Gender	Frequency	Percent	Cumulative percent
Male	10	22.7	22.7
Female	34	77.3	100.0
Total	44	100.0	

4.2.2.4 *The presence of disability centres/units, and students with learning disabilities*

On questionnaire one, faculty were asked about the existence of disability centres/units in their universities. Almost half of the faculty members (n=81, 45.5%)

were not sure about the existence of a disability centre/unit at their university while just 28.7% (n=51) were sure as seen in Table 4.8.

Table 4. 8: Faculty members’ responses to Item 7 in Part I of their questionnaire

Existence of disability centres and units	Frequency	Percent	Cumulative percent
Yes	51	28.7	28.7
No	46	25.8	54.5
Not sure	81	45.5	100.0
Total	178	100.0	

By contrast, on questionnaire two, staff members were asked about the existence of students with learning disabilities at their disability centres/units. Most of the staff members (n=39, 88.6%) said that there were students with learning disabilities in their disability centres/units at their universities while only n=3, 6.8% were not sure about the existence of students with learning disabilities in their disability centres/units (e.g., see Table 4.9).

Table 4. 9: Staff members’ responses to Item 8 in Part I of their questionnaire

Existence of students with learning disabilities	Frequency	Percent	Cumulative percent
Yes	39	88.6	88.6
No	2	4.5	93.2
Not sure	3	6.8	100.0
Total	44	100.0	

4.2.2.5 Availability of policy related to the provision of reasonable adjustments.

Items 8 in the faculty’s questionnaire and item number 9 in the staff’s questionnaire were about the existence of the policy of the provision of reasonable adjustments at their universities. On questionnaire one, slightly over half of the

faculty members (n=90, 50.5%) were not sure about the existence of a policy while 24.2% said yes and 25.3% said no. It was interesting to see that half of the faculty members did not choose either 'yes' or 'no' when responding to the existence of the policy of reasonable adjustments, instead, they selected 'not sure'. This means that the availability of information regarding the existence of disability centres/units and policy may be an issue for those faculty members (see Table 4.10). By contrast, on questionnaire two, most disability centre/unit staff members (81.8%, n=36) reported that policy was available, which was as expected, as disability centre/unit staff members may be more familiar with such policies compared to faculty members (see Table 4.11).

Table 4. 10: Faculty members' responses to Item 8 in Part I of their questionnaire

Availability of policy	Frequency	Percent	Cumulative percent
Yes	43	24.2	24.2
No	45	25.3	49.4
Not sure	90	50.5	100.0
Total	178	100.0	

Table 4. 11: Staff members' responses to Item 9 in Part I of their questionnaire

Availability of policy	Frequency	Percent	Cumulative percent
Yes	36	81.8	81.8
No	3	6.8	88.6
Not sure	5	11.4	100.0
Total	44	100.0	

4.2.2.6 Training related to the additional support for students with learning disabilities and disability.

Item 9 in the faculty's questionnaire and item 10 in the staff's questionnaire were about training related to the provision of additional support or disability. As shown in Table 4.12, the majority of faculty members had no training either on

offering disability-related additional support (92.7%, n=165), except for 4 faculty members (2.2%) who reported they had training in hearing impairment (n=3) and visual impairment (n=1). It was interesting that no faculty member reported training on learning disabilities. Differently, on questionnaire two, 43.2%, (n=19) of staff members at disability centres/units reported that they had received with regards to disability and additional support. However, 38.6% (n=17) reported that they had no training e.g., see Table 4.13.

Table 4. 12: Faculty members’ responses to Item 9 in Part I of their questionnaire

Training	Frequency	Percent	Cumulative percent
Yes	9	5.06	
No	165	92.70	
Other disability training, please give details	4	2.2	
Total	178	100.0	

Table 4. 13: Staff members’ responses to Item 10 in Part I of their questionnaire

Training	Frequency	Percent	Cumulative percent
Yes	19	43.18	
No	17	38.64	
Other disability training, please give details	8	18.18	
Total	44	100.0	

4.2.3 Part II: Understanding of Learning Disabilities and Reasonable Adjustments

Information related to the concept of learning disabilities and reasonable adjustments was the scope of this part. Both questionnaires (for faculty and staff at disability centres/units) included the same items; for example, items 1 to 5 aimed to capture ideas about learning disabilities and items 6 to 9 were about ideas related to the concept and definition of reasonable adjustments. Items 10 to 13 explored the

broader beliefs of faculty members and staff members at disability centres/units about learning disabilities and students with learning disabilities in higher education. The responses of faculty and staff members are shown below in tables 4.14 and 4.15.

Table 4. 14: Faculty members' responses to Part II of their questionnaire.

Items	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1. Learning disabilities are a disorder in one or more of the basic psychological processes that involve the understanding and use of written or spoken language	3 1.69%	7 3.93%	38 21.35%	102 57.30%	28 15.73%
2. The term 'learning disabilities' refers to students who exhibit lower academic achievement than their peers even though they have above-average intelligence.	14 7.87%	33 18.54%	46 25.84%	65 36.52%	20 11.24%
3. Reading or writing disorders (e.g., dyslexia or dyspraxia) could be considered a learning disability.	2 1.12%	10 5.62%	10 5.62%	115 64.61%	41 23.03%
4. Learning disabilities are a result of another disability (e.g., visual or hearing impairment).	24 13.48%	30 16.85%	25 14.04%	76 42.70%	23 12.92%
5. Social, cultural, or environmental factors can cause a learning disability.	8 4.49%	17 9.55%	30 16.85%	79 44.38%	44 24.72%
6. The term 'reasonable adjustments' describe the adaptations that are made to instruction and assessment which allow students with learning disabilities to access the content being taught.	3 1.69%	2 1.12%	64 35.96%	83 46.63%	26 14.61%
7. Reasonable adjustments can negatively affect the academic performance standards of university programmes.	19 10.67%	43 24.16%	75 42.13%	30 16.85%	11 6.18%
8. Reasonable adjustments are connected to the academic success of students with learning disabilities.	0 0.00%	8 4.49%	57 32.02%	85 47.75%	28 15.73%
9. The term 'reasonable adjustments' includes different types of adjustments (e.g., adjustments related to teaching, learning, and assessment).	0 0.00%	1 0.56%	67 37.64%	84 47.19%	26 14.61%
10. I think that there are students with learning disabilities in my university.	0 0.00%	0 0.00%	34 19.10%	79 44.38%	65 36.52%
11. I believe that students with learning disabilities should be educated in higher educational institutions (e.g., universities).	1 0.56%	4 2.25%	12 6.74%	88 49.44%	73 41.01%
12. I believe that university students with learning disabilities should receive additional support such as reasonable adjustments.	0 0.00%	1 0.56%	12 6.74%	73 41.01%	92 51.69%
13. I expect that students with learning disabilities can be successful in higher education.	0 0.00%	2 1.12%	17 9.55%	80 44.94%	79 44.38%

Table 4. 15: Staff members' responses to Part II of their questionnaire.

Items	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1. Learning disabilities are a disorder in one or more of the basic psychological processes that involve the understanding and use of written or spoken language.	0 0.00%	5 11.36%	7 15.91%	26 59.09%	6 13.64%
2. The term 'learning disabilities' refers to students who exhibit lower academic achievement than their peers even though they have above-average intelligence.	1 2.27%	9 20.45%	8 18.18%	23 52.27%	3 6.82%
3. Reading or writing disorders (e.g., dyslexia or dyspraxia) could be considered a learning disability.	1 2.27%	3 6.82%	3 6.82%	29 65.91%	8 18.18%
4. Learning disabilities are a result of another disability (e.g., visual or hearing impairment).	6 13.64%	14 31.82%	14 31.82%	9 20.45%	1 2.27%
5. Social, cultural, or environmental factors can cause a learning disability.	2 4.55%	7 15.91%	11 25.00%	20 45.45%	4 9.09%
6. The term reasonable adjustments describe the adaptations that are made to instruction and assessment which allow students with learning disabilities to access the content being taught.	0 0.00%	3 6.82%	9 20.45%	28 63.64%	4 9.09%
7. Reasonable adjustments can negatively affect the academic performance standards of university programmes.	4 9.09%	10 22.73%	18 40.91%	11 25.00%	1 2.27%
8. Reasonable adjustments are connected to the academic success of students with learning disabilities.	0 0.00%	3 6.82%	15 34.09%	22 50.00%	4 9.09%
9. The term 'reasonable adjustments' includes different types of adjustments (e.g., adjustments related to teaching, learning, and assessment).	0 0.00%	1 2.27%	11 25.00%	27 61.36%	5 11.36%
10. I think that there are students with learning disabilities in my university.	0 0.00%	2 4.55%	5 11.36%	17 38.64%	20 45.45%
11. I believe that students with learning disabilities should be educated in higher educational institutions (e.g., universities).	1 2.27%	3 6.82%	3 6.82%	20 45.45%	17 38.64%
12. I believe that university students with learning disabilities should receive additional support such as reasonable adjustments.	0 0.00%	2 4.55%	1 2.27%	23 52.27%	18 40.91%
13. I expect that students with learning disabilities can be successful in higher education.	0 0.00%	2 4.55%	7 15.91%	17 38.64%	18 40.91%

As can be seen in Tables 4.14 and 4.15, over half of the faculty (57.3%,n=102/178) and staff members at disability centres/units (59%, n=26/44) agreed that learning disabilities were a disorder in one or more of the basic psychological processes involving understanding and using written or spoken language. However, on the second item, even though 36.52% of faculty members

(n=65) and 52.2% of staff members (n=23) agreed that the term 'learning disabilities' referred to students who exhibited lower academic achievement than their peers even though they had above-average intelligence, 25.84% of faculty members (n=46) were not sure and 20.45% of staff members (n=9) disagreed with the statement. This shows that different perspectives might exist among some of the participants in both groups regarding the connection between low academic achievement and intelligence when referring to learning disabilities.

Another finding was related to the nature of and the cause of learning disabilities i.e., items 4 and 5. For example, 42.7% and 44.3% of faculty members agreed that learning disabilities were a result of another disability (e.g., visual or hearing impairment) and that social, cultural or environmental factors could cause a learning disability. This was a surprising finding as the Saudi educational policy considers that learning disabilities should not be considered as resulting from another disability, social, cultural or environmental factors. On Questionnaire 2, 31.8% (n=14) of staff members equally disagreed and were 'not sure' that learning disabilities were the result of another disability (e.g., visual or hearing impairment) which was a response closer to the Saudi policy definition. However, 45.45% (n=20) of staff members at disability centres/units agreed that social, cultural or environmental factors could cause a learning disability, which is consistent with most faculty members but not with the Saudi policy definition of learning disabilities. This shows that different perspectives regarding the Saudi policy definition of learning disabilities may exist among some of the participating faculty and staff members.

Items 6 to 9 collected information regarding faculty and staff's understanding of reasonable adjustments. Similar perspectives were found on all items (6 to 9) for

example, 46.63% (n=83/178) of faculty members and 63.64% (n=28/44) of staff members at disability centres/units agreed that the term 'reasonable adjustments' described the adaptations made to instruction and assessment which allowed students with learning disabilities to access the content being taught. Also, on item 8, 47.75% (n=85) of faculty and 50.00% (n=22) of staff members agreed that reasonable adjustments were connected to the academic success of students with learning disabilities. And 42.13% (n=75) of faculty members and 40.91% (n=18) of staff reported being uncertain that reasonable adjustments could negatively affect the academic performance standards of university programmes.

In addition, 44.38%, (n=79) of faculty members agreed that there were students with learning disabilities in their universities, and 49.44% (n=88) of faculty members agreed that students with learning disabilities should be educated in higher educational institutions e.g., universities. Similarly, 45.45% (n=20) of staff members at the disability centres/units strongly agreed that there were students with learning disabilities in their universities, and 45.45% (n=20) agreed students with learning disabilities should be educated in higher educational institutions (e.g., universities). This result raises the question about what shapes the diverse perceptions of the faculty members. Finally, 44.9% (n=80) of faculty members agreed that students with learning disabilities could be successful in higher education while 40.9% (n=18) of staff members strongly agreed with this.

4.2.3.1 Comparing Differences Between Male and Female Participants in Part II of each Questionnaire.

Faculty members' questionnaire

100 male and 78 female faculty members reported similarities and differences in their responses to Part II of their questionnaire. For example, most female (61.5%) and male (54%) participants agreed that learning disabilities were a disorder in one or more of the basic psychological processes that involved the understanding and use of written or spoken language. Also, 41% of female and 33% of male faculty members agreed that the term 'learning disabilities' referred to students who exhibited lower academic achievement than their peers even though they might have above-average intelligence. By contrast, on item 5 most female faculty (47.1%) agreed that social, cultural, or environmental factors could cause a learning disability, while most male faculty were equally not sure (40.0%) and agreed (40.0%) with this item.

Regarding the concept of reasonable adjustments, more than half of female faculty members (55.1%) agreed that the term 'reasonable adjustments' described the adaptations made to instruction and assessment which enabled students with learning disabilities to access the content being taught while 44.0% of male faculty members were 'not sure'. Similarly, more than half of female faculty members (52.6%) agreed that the term 'reasonable adjustments' included different types of adjustments (e.g., adjustments related to teaching, learning and assessment), though only 43% of male faculty members agreed and 47% were not sure. Regarding whether the provision of reasonable adjustments could negatively affect the academic performance standards of university programmes, 37.2% of female and 46% of male faculty members said they were 'not sure'. It is notable that so many faculty and staff at the disability centres/units were unsure about this item.

Staff members' questionnaire

With regards to disability centre/unit staff members, there were fewer men (n=10) than women (n=34), but this was probably because female staff were more willing to participate in the study (see above Table 4.7). Male and female staff members showed more differences in their responses than male and female faculty members. On items 1 and 2, in which most males and female faculty were similar, most male and female staff reported different perspectives. For example, on item 2, more than half of female staff (58.8%) agreed that the term 'learning disabilities' referred to students who exhibited lower academic achievement than their peers even though they had above-average intelligence while 40% of male staff disagreed and 30% equally were not sure and agreed. Also, on items 8 and 9, 61.8% of female staff agreed that reasonable adjustments were connected to the academic success of students with learning disabilities and 70.6% agreed that the term 'reasonable adjustments' included different types of adjustments (e.g., adjustments related to teaching, learning and assessment). However, 60% and 50% of male staff members respectively were not sure about either the relevance of reasonable adjustments to the academic achievement of students (item 8) or the types of adjustments (item 9). This contrasts with female staff members of whom 26.5% and 17.6% were 'not sure' for items 8 and 9 respectively. I was expecting that information about these issues would be available at the disability centres/units, and that staff would know about this as a part of their job/role in the provision of reasonable adjustments, so the uncertainty of the male staff is difficult to interpret

4.2.3.2 Comparing differences based on university locations in Part II of each Questionnaire.

Faculty members' questionnaire

Faculty members were grouped based on their university location i.e., South n=20, North n=50, Middle n=50, West n=47 and East n=11 to see if there were differences in responses based on their locations in relation to Part II of their questionnaire. A few notable differences and similarities exist in the responses of faculty members based on their university locations. For example, on item 2, roughly similar percentages of faculty members from the north 35%, south 36%, middle 42%, and west 38.3% agreed that the term 'learning disabilities' referred to students who exhibited lower academic achievement than their peers even though they had above-average intelligence though nearly half (45.5%) of faculty members from eastern universities were not sure.

Also, on item 6, nearly half the faculty members from the north (45%) and east (46.4%) were not sure that term 'reasonable adjustments' described the adaptations made to instruction and assessment which allow students with learning disabilities to access the content being taught; while a similar percentage of faculty members from the south (52%), middle (48%) and west (51.1%) reported they agreed. By contrast, most or at least half of faculty members from all locations (south 66%, north 50%, middle 64%, west 66% and east 81.8%) agreed that reading or writing disorders (e.g., dyslexia or dyspraxia) could be considered a learning disability. Also, several faculty members from all locations (south 46%, north 30%, middle 44%, west 44.7%, and east 36.4%) agreed that learning disabilities were a result of another

disability (e.g., visual or hearing impairment) which again was not consistent with the Saudi policy definition of learning disabilities according to which learning disabilities should not be considered as the result of another disability.

Staff members' questionnaire

Staff members were also grouped based on their university location e.g., south n=7, north n=3, middle n=19, west n=15 and east n=0. Staff were sometimes very diverse in their responses, for example, on items 1 and 2, most staff members from all locations agreed that learning disabilities were a disorder in one or more of the basic psychological processes that involved the understanding and use of written or spoken language and agreed that the term 'learning disabilities' referred to students who exhibited lower academic achievement than their peers even though they had above-average intelligence. However, on item 4 staff from all university locations reported diverse responses, for example, 31.6% of staff from middle universities disagreed that learning disabilities are a result of another disability (e.g., visual or hearing impairment) while 40% of staff from west universities were not sure about this item. Also, on the same item (4), 33.3% of staff from the north and 28.6% of staff from south universities equally strongly disagreed, disagreed, and were not to the issue of whether they thought that learning disabilities were the result of another disability such as visual or hearing impairment. The results show that even disability centre/unit staff members from the same university location e.g., north and south universities had different views on what learning disabilities resulted from. Another interesting finding was that a high number of staff from all university locations were 'not sure' about the effect of 'reasonable adjustments' on the academic performance standards of university programmes (item 7), except for staff from northern

universities 66.7% of whom disagreed that such adjustments negatively affected standards.

4.2.4 Part III: Factors Related to the Provision of Reasonable Adjustments.

This part consisted of information related to the collaboration between faculty, staff members and their universities, as well as information related to the policy of reasonable adjustments. For example, faculty members were asked to rate 9 items in this part: items 1 to 5 were about their collaboration with disability staff, and items 6 to 9 were about the policy of reasonable adjustments at their universities. Staff members at the disability centres/units were also asked about their collaboration with faculty members (items 1 to 6), the collaboration of their universities with the disability centre/unit (items 7 to 11) and reasonable adjustments policy at their universities (items 12 to 15). To collect information on this part, only faculty members who responded with 'yes' to question 7 of Part I (n=51/178) were given access to collaboration items (1 to 5), and faculty who said 'yes' to question 8 of part 1 (n=43) were given access to policy items (6 to 9).

The same procedure was used with Questionnaire 2 (staff members at disability centres/units). Staff members who said there was a policy regarding reasonable adjustments (n=36/44) and that they registered students with learning disabilities at their disability centre/unit (n=39) were given access to policy items and collaboration items. The only exception was that items 7 to 11 (the collaboration of their universities with the disability centre/unit) were given to all staff members (n=44). The responses of faculty and staff members are shown below in tables 4.16 and 4.17.

Table 4. 16: Faculty members' responses to Part III of their questionnaire.

Items	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1. The disability centre/unit informed me about the needs of students with Learning Disabilities with regards to reasonable adjustments.	8 15.69%	7 13.73%	10 19.61%	20 39.22%	6 11.76%
2. The disability centre/unit helped me to identify suitable reasonable adjustments for students with learning disabilities.	8 15.69%	10 19.61%	13 25.49%	14 27.45%	6 11.76%
3. The disability centre/unit provides me with the required assistance regarding the provision of reasonable adjustments to students with learning disabilities.	8 15.69%	8 15.69%	15 29.41%	14 27.45%	6 11.76%
4. The disability centre/unit provides me with sufficient opportunities (e.g., training and workshops) regarding the provision of reasonable adjustments to students with learning disabilities.	12 23.53%	10 19.61%	16 31.37%	9 17.65%	4 7.84%
5. Generally, the disability centre/unit staff are willing to work and collaborate with faculty members regarding the provision of reasonable adjustments to students with learning disabilities.	3 5.88%	7 13.73%	18 35.29%	15 29.41%	8 15.69%
6. My university provides awareness of university policy regarding the provision of reasonable adjustments to students with learning disabilities.	0 0.00%	6 14.63%	18 43.90%	12 29.27%	5 12.20%
7. My university provides a clear written policy regarding the provision of reasonable adjustments to students with learning disabilities.	1 2.33%	4 9.30%	21 48.84%	11 25.58%	6 13.95%
8. From my perspective, the policy of reasonable adjustments to students with learning disabilities in my university is effective.	1 2.33%	9 20.93%	20 46.51%	8 18.60%	5 11.63%
9. There is a clear policy regarding the provision of reasonable adjustments to students with learning disabilities in my university.	0 0.00%	6 13.95%	21 48.84%	11 25.58%	5 11.63%

Table 4. 17: Staff members' responses to Part III of their questionnaire.

Items	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1. Faculty members generally accept the reasonable adjustments advised by the disability centre/unit for students with learning disabilities.	2 5.13%	5 12.82%	6 15.38%	19 48.72%	7 17.95%
2. Faculty members are willing to provide students with learning disabilities with reasonable adjustments as advised by the disability centre/unit staff.	0 0.00%	6 15.38%	8 20.51%	16 41.03%	9 23.08%
3. Faculty members are willing to communicate with the disability centre/unit staff regarding the provision of reasonable adjustments to students with learning disabilities.	1 2.56%	6 15.38%	6 15.38%	19 48.72%	7 17.95%
4. Faculty members believe in the effectiveness of reasonable adjustments for students with learning disabilities.	2 5.13%	5 12.82%	8 20.51%	17 43.59%	7 17.95%
5. Faculty members are willing to attend courses and workshops presented by the disability centre/unit regarding the provision of reasonable adjustments for students with learning disabilities.	1 2.56%	5 12.82%	8 20.51%	18 46.15%	7 17.95%
6. Generally, faculty members are willing to work and collaborate with the disability centre/unit staff regarding the provision of reasonable adjustments for students with learning disabilities.	0 0.00%	6 15.38%	6 15.38%	20 51.28%	7 17.95%
7. I receive adequate training and professional developmental programmes from my university regarding the provision of reasonable adjustments to students with learning disabilities.	1 2.27%	10 22.73%	17 38.64%	12 27.27%	4 9.09%
8. I receive enough support from my university toward facilitating the provision of reasonable adjustments to students with learning disabilities.	1 2.27%	10 22.73%	13 29.55%	16 36.36%	4 9.09%
9. My university provides the disability centre/unit with enough funds to successfully accommodate students with learning disabilities.	0 0.00%	6 13.64%	11 25.00%	22 50.00%	5 11.36%
10. My university does not provide the disability centre/unit with enough staff members to work with students with learning disabilities.	3 6.82%	16 36.36%	8 18.18%	11 25.00%	6 13.64%
11. My university recruits disability centre/unit staff who are experts in learning disabilities.	3 6.82%	12 27.27%	11 25.00%	16 36.36%	2 4.55%
12. My university provides awareness of university policy regarding the provision of reasonable adjustments.	1 2.78%	2 5.56%	11 30.56%	20 55.56%	2 5.56%
13. My university provides a clear written policy regarding the provision of reasonable adjustments.	1 2.78%	4 11.11%	14 38.89%	13 36.11%	4 11.11%
14. From my perspective, the policy of reasonable adjustments in my university is effective.	0 0.00%	4 11.11%	14 38.89%	15 41.67%	3 8.33%
15. There is a clear policy regarding the provision of reasonable adjustments in my university.	0 0.00%	5 13.89%	14 38.89%	14 38.89%	3 8.33%

Table 4.16 shows that for item 1, 39.2% of faculty members (n=20) agreed that disability centres/units at their universities informed them about the needs of students with learning disabilities and helped them in identifying suitable reasonable adjustments (n=14, 27.4%). However, a similar percentage (n=13, 25.4%) were 'not

sure'. This disparity was also seen in item 4, as 31.3% of faculty members (n=16) were 'not sure' about being provided with sufficient opportunities (e.g., training and workshops) regarding the provision of reasonable adjustments for students with learning disabilities, while a similar percentage (n=12, 23.5%) strongly disagreed that they were provided with training and workshops.

By contrast, in Questionnaire 2, 41% of staff members at the disability centres/units agreed that faculty members were willing to provide students with learning disabilities with reasonable adjustments (n=16) and to communicate with the disability centre/unit staff regarding the provision of reasonable adjustments (48.7%, n=19). Also, 48.7% agreed that faculty members generally accepted the reasonable adjustments advised by the disability centres/units (n=19). This was an interesting finding as 35.2% of faculty members (n=18) said they were 'not sure' about the willingness of disability centre/unit staff to work with them regarding the provision of reasonable adjustments (item 5). Additionally, nearly half of staff members at the disability centres/units agreed that faculty members believed in the effectiveness of reasonable adjustments (43.5%, n=17), and 46.1% said faculty were willing to attend courses and workshops presented by the disability centre/unit (n=18). This was an unexpected finding as 23.5% of faculty members strongly disagreed about being provided with training and workshops on the provision of reasonable adjustments by the disability centres/units, which seems to indicate a conflict in perspectives between faculty and disability centres/units regarding training and workshops.

As explained above, 5 items related to university collaboration (items 7 to 11) were given to all participating disability centre/unit staff n=44 (see Table 4.17). These

items included statements about training, support, funds, staff, expert staff in learning disabilities as well as professional development programmes that disability centres/units can receive from their universities. Although exactly half believed they had sufficient funds to successfully accommodate students with learning disabilities (n=22); just 36.6% agreed that their universities provided them with enough support towards the provision of reasonable adjustments (n=16), and 38.6% were not sure they received adequate training and professional development from their university regarding the provision of reasonable adjustments for students with learning disabilities (n=17).

The last items on both questionnaires of Part III were about the policy of reasonable adjustments. All items on both questionnaires were the same (see items 6-9 in Questionnaire 1 and items 12-15 in Questionnaire 2) and included statements about members of staff being aware of the policy and the effectiveness of policy as well as being provided with a written policy regarding the provision of reasonable adjustments. For example, on Questionnaire 1, nearly half were not sure about the effectiveness of that policy n=20, 46.5% (item 8) or whether the policy was sufficiently clear n=21, 48.8% (item 9), although 43 out of 178 faculty members on item 8 of Part I said 'yes' that they had an existing policy of reasonable adjustments. In contrast, on Questionnaire 2, 38.89% of staff members (n=14/44) were not sure whether their institutions' written policy regarding the provision of reasonable adjustments was sufficiently clear, although a similar percentage (36.11%) said it was. Also, on item 14, 38.89% of staff members (n=14) were not sure about the effectiveness of the reasonable adjustments policy at their universities, while 41.67% of staff members (n=15) agreed that it was effective. Lastly, on item 15 equal

numbers of staff at the disability centres/units were not sure (38.8%) or agreed (38.8%) that there was a clear policy regarding the provision of reasonable adjustments for students with learning disabilities in their university. This complexity in responses on policy items could be due to differences between the institutions.

4.2.4.1 Comparing Differences Between Male and Female Participants in Part III of each Questionnaire.

Faculty members' questionnaire

30 Male and 20 female faculty members reported similar and notable differences in their responses to items about collaboration and policy. For example, 40% of male and 38.1% of female (faculty members agreed that disability centres/units in their universities informed them about the needs of students with learning disabilities regarding reasonable adjustments. However, on item 2, 30% of male faculty members were 'not sure' whether disability centres/units helped them to identify suitable reasonable adjustments while 28.6% of females thought they did. Similarly, 28.6% of female faculty agreed that the disability centre/unit provided them with the required assistance regarding the provision of reasonable adjustments to students with learning disabilities while 36.7% of male faculty were not sure.

Regarding training and workshops, most female faculty equally strongly disagreed (28.6%) and were not sure (28.6%) that the disability centres/units at their universities provide them with training and workshops though more of the male faculty (33.3%) were not sure. For items related to policy most males and female faculty members gave similar responses ('not sure') to all items except for item 6. For example, half of the male faculty (52.4%) were not sure about the awareness of

reasonable adjustments policy at their universities while equal numbers of female faculty were either not sure (35%) or agreed (35%).

Staff members' questionnaire

As with the faculty members, the responses of male (n=8) and female (n=31) staff members at disability centres/units were compared with regards to collaboration (items 1 to 11) and policy (items 12 to 15). For example, on item 1, 40% of males and 44.1% of female staff agreed that faculty members generally accepted the reasonable adjustments advised by the disability centre/unit for students with learning disabilities. However, on items 2 and 3, 30% of male staff disagreed that faculty members were willing to provide students with learning disabilities with reasonable adjustments while 41.2% females agreed that they were. Also, on item 3, 30% of male staff disagreed while 50% of female staff agreed that faculty members were willing to communicate with disability centre/unit staff regarding the provision of reasonable adjustments to students with learning disabilities.. The difference in the reported level of collaboration among male and female faculty and staff members at the disability centres/units may be due to that in Saudi public universities, male and female employees have separate departments within one single university and thus the level of collaboration may be different.

Similarity and differences in responses were also seen in items related to the collaboration of Saudi public universities with the disability centres/units. For example, on item 8, more than half of the male staff at disability centres/units (60%) disagreed that there was enough support from their universities, while 41.2% of female staff agreed that they were receiving enough support. Also, on item 11, half

of the male staff (50%) disagreed on the availability of disability centre/unit staff who were experts in learning disabilities while 30% of male agreed. By contrast with female staff, of whom 38.2% reported they agreed that their universities recruited disability centre/unit staff who were experts in learning disabilities though 32.4% were not sure and 20.6% disagreed. However, on item 9, 50% of male and 50% of female staff agreed on being provided with enough funds to successfully accommodate students with learning disabilities. This was interesting as when it comes to funding there was no notable difference, while, regarding the level of support received by their universities there was a notable difference. This may be due to the Saudi public universities receiving their funding from the Saudi Ministry of Education.

Lastly, regarding policy items 11 to 15 the staff survey yielded interesting results. For example, 40% of male staff and 47% of female staff agreed that their universities raised awareness of the policy regarding the provision of reasonable adjustments. However, 30% of the men thought that the policy was not clearly written and 38.2% of the women were not sure. More interestingly, on item 15, male staff equally disagreed (30%) and agreed (30%) that there is a clear policy regarding the provision of reasonable in their universities though 38.2% of female staff were not sure and 32.4% agreed that there was a clear policy. It was interest to see that men and women staff member had different perspectives regarding policy which may be due to that participants were from different university location in Saudi Arabia.

4.2.4.2 Comparing Differences Based on University Locations in Part III of each Questionnaire.

Faculty members' questionnaire

As this study included different Saudi public universities, it was interesting to compare participants' responses based on their university locations. Unexpectedly, n=51 faculty members from different university locations (e.g., north=5, south=8, middle=16, west=21, and east=1) showed very diverse responses even within one single location. For example, on item 1, 40% of faculty members from northern universities equally strongly disagreed and agreed that the disability centre/unit informed them about the needs of students with learning disabilities for reasonable adjustments. However, on the same item, most 25% of faculty members from southern universities equally strongly disagreed, disagreed, and agreed, that the disability centre/unit informed them about the needs of students with learning disabilities to reasonable adjustments. Meaning that there was an agreement and disagreement among faculty members from northern and southern universities. Differences in responses among faculty members from a single location in Saudi Arabia may be due to the presence of multiple public universities in each region (see Figure 4.1) or variations in practices at disability centres/units.

On the other hand, most faculty members from middle and western universities shared similar perspectives as 56.3% of faculty members from the middle and 33.3% of those from western universities agreed that the disability centre/unit informed them about the needs of students with learning disabilities regarding reasonable

adjustments. It is worth mentioning that the largest disability centres/units are in middle and western public universities.

Moreover, diverse perspectives were given for item 4, for instance, 40% of faculty members from northern universities strongly disagreed and 37.5% of faculty members from the south disagreed about being provided with sufficient opportunities (e.g., training and workshops) regarding the provision of reasonable adjustments to students with learning disabilities. On the same item, 43.8% of faculty members from the middle and 100% from eastern universities were 'not sure'; while faculty members from western universities equally strongly disagreed (28.6%) or were not sure (28.6%).

So far items related to training and workshops have shown different responses among groups, genders and universities. On items 7 and 8 a large number of faculty members from different university locations were unsure about being provided with a clear written policy (north 50%, south 55.6%, middle 38.9%, west 50% and east 100%) or that policy of reasonable adjustments to students with learning disabilities in their university was effective (north 50%, south 44.4%, middle 38.9%, west 50%, and east 100%). Interestingly, uncertainty about policy existed among participants in both groups (faculty and staff) and genders as well as from all university locations, which could point out that more investigation regarding policy is needed.

Staff members' questionnaire

Disability centre/unit staff were also compared in terms of their responses about collaboration (items 1 to 11) and policy (items 12 to 15) according to their university locations (e.g., north=3, south=6, middle=17 and west=13). On this part, most staff

members gave diverse perspectives on all items (the only exception being item one) with different responses even existing within one single university location. On item one, most staff members from different university locations agreed that faculty members generally accepted the reasonable adjustments advised for students with learning disabilities by the disability centre/unit. Moreover, on item 6, staff from all university locations generally agreed that faculty members were willing to work and collaborate with disability centre/unit staff regarding the provision of reasonable adjustments for students with learning disabilities. The exception was staff from southern universities where they equally disagreed (33.3%) and strongly agreed (33.3%) about this item. This major difference of opinion about faculty willingness to collaborate within a single location was due to the fact that there were six difference universities represented from the southern area.

Another point of divergence was item 7, as over half of the disability centre/unit staff (57.1%) from southern universities disagreed about being provided with adequate training and professional development programmes from their universities while all the staff from the north (100%) and 42.1% of the middle universities were not sure about this. However, almost half of the staff (46.7%) from western universities agreed that they received adequate training and professional developmental programmes from their university regarding the provision of reasonable adjustments to students with learning disabilities. It is interesting to see a big difference in the perceived level of support (e.g., training and professional development programmes) between staff members from southern and western universities, but it is worth mentioning that compared to western universities,

southern universities are still new universities and most have just recently been established. The next section presented Part IV of both questionnaires.

4.2.5 Part IV: Capacity, Resources and Interest Regarding the Provision of Reasonable Adjustments.

Part 4 was different in both questionnaires as questionnaire one (faculty members) consisted of two sections A and B while questionnaire two (staff members) only included one section A. Section A in both questionnaires aimed to capture faculty and staff members' ideas about the capacity and availability of resources regarding the provision of reasonable adjustments in their universities. Section B was given only to faculty members to explore their level of interest in this provision.

4.2.5.1 Section A: Capacity and Availability of Resources Regarding the Provision of Reasonable Adjustments

To capture participants' ideas about the capacity and availability of resources regarding the provision of reasonable adjustments in their universities participants were given the following statement "*To what extent do you agree with the statement: there is the capacity and resources available in my university in providing each of the following adjustments.*" Then 14 types of reasonable adjustments were listed on a five-point Likert scale (e.g., from strongly disagree to strongly agree). Tables 4.18 and 4.19 present the responses of faculty and staff members at the disability centres/units to this section (A).

Table 4. 18: Faculty members' responses to Section A of Part IV of their questionnaire.

There is the capacity and resources available in my university in providing each of the following adjustments:	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1. Providing lecture notes before the beginning of the lecture.	4 2.25%	19 10.67%	34 19.10%	85 47.75%	36 20.22%
2. Large font size on presentation and exams questions.	1 0.56%	22 12.36%	44 24.72%	79 44.38%	32 17.98%
3. Alternative assignment formats (e.g., oral presentations instead of written assignments).	5 2.81%	17 9.55%	50 28.09%	87 48.88%	19 10.67%
4. Alternative exam formats (e.g., oral presentations instead of a written exam or multiple choice instead of essay tests).	6 3.37%	25 14.04%	50 28.09%	71 39.89%	26 14.61%
5. Extra credit assignments.	4 2.25%	11 6.18%	51 28.65%	82 46.07%	30 16.85%
6. Different rooms for exams	8 4.49%	21 11.80%	51 28.65%	65 36.52%	33 18.54%
7. Extra time to complete coursework.	3 1.69%	17 9.55%	47 26.40%	81 45.51%	30 16.85%
8. Extra time in exams.	6 3.37%	26 14.61%	60 33.71%	65 36.52%	21 11.80%
9. A recording of the lecture.	4 2.25%	15 8.43%	47 26.40%	83 46.63%	29 16.29%
10. A note taker (someone to take notes of the lecture for students).	11 6.18%	26 14.61%	60 33.71%	53 29.78%	28 15.73%
11. A reader (someone to read the exam questions for students).	7 3.93%	18 10.11%	51 28.65%	74 41.57%	28 15.73%
12. A proof-reader (someone to assist with language).	9 5.06%	26 14.61%	56 31.46%	61 34.27%	26 14.61%
13. A calculator to use in class and on the exam to assist with mathematics assignments.	2 1.12%	9 5.06%	59 33.15%	78 43.82%	30 16.85%
14. A computer to assist with written assignments and exams.	4 2.25%	25 14.04%	62 34.83%	59 33.15%	28 15.73%

Table 4. 19: Staff members' responses to Part IV of their questionnaire.

There is the capacity and resources available in my university in providing each of the following adjustments:	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1. Lecture notes before the beginning of the lecture.	0 0.00%	4 9.09%	16 36.36%	23 52.27%	1 2.27%
2. Large font size on presentations and exam questions.	0 0.00%	4 9.09%	17 38.64%	20 45.45%	3 6.82%
3. Alternative assignment formats (e.g., oral presentations instead of written assignments).	1 2.27%	7 15.91%	15 34.09%	16 36.36%	5 11.36%
4. Alternative exam formats (e.g., oral presentations instead of a written exam or multiple choice instead of essay tests).	3 6.82%	5 11.36%	10 22.73%	20 45.45%	6 13.64%
5. Extra credit assignments.	0 0.00%	7 15.91%	14 31.82%	19 43.18%	4 9.09%
6. Different rooms for exams	1 2.27%	3 6.82%	6 13.64%	22 50.00%	12 27.27%
7. Extra time to complete coursework.	0 0.00%	3 6.82%	10 22.73%	23 52.27%	8 18.18%
8. Extra time in exams.	1 2.27%	3 6.82%	8 18.18%	24 54.55%	8 18.18%
9. A recording of the lecture.	1 2.27%	5 11.36%	15 34.09%	18 40.91%	8 18.18%
10. A note taker (someone to take note of the lecture for students).	2 4.55%	5 11.36%	14 31.82%	18 40.91%	5 11.36%
11. A reader (someone to read the exam questions for students).	1 2.27%	4 9.09%	5 11.36%	22 50.00%	5 11.36%
12. A proof-reader (someone to assist with language).	1 2.27%	7 15.91%	12 27.27%	15 34.09%	9 20.45%
13. A calculator to use in class and in the exam to assist with mathematics assignments.	2 4.55%	2 4.55%	19 43.18%	15 34.09%	6 13.64%
14. A computer to assist with written assignments and exams.	1 2.27%	5 11.36%	17 38.64%	15 34.09%	6 13.64%

Tables 4.18 and 4.19 show that faculty and staff members mostly agreed on the capacity and availability of resources at their universities on most adjustments listed in their questionnaires. For example, for the first item, faculty (n=85, 47.75%) and staff members (n=23, 52.27%) mostly agreed on the capacity and resources

available at their universities in providing lecture notes before the beginning of the lecture. It was interesting to see similar agreement about this item among faculty and staff, especially since this adjustment is at the discretion of faculty members. However, this may indicate that from the staff's perspective, the capacity and availability of resources to provide such an adjustment is there. Another interesting finding was that most faculty and staff members agreed on the capacity and resources available at their universities in providing alternative assignment formats (faculty 48.8% – staff 36.3%) and alternative exam formats (faculty 38.9% – staff 45.4%).

A difference, between faculty and staff members, was found on adjustment number 10 (a 'note taker'). For example, 33.7% of faculty members were not sure about the capacity and availability of resources at their universities to provide this adjustment while 40.9% of staff agreed about the capacity and availability of resources to provide this adjustment. Also, another difference was that faculty reported a similar result: 33.7% were not sure while 36.5% agreed that there was the capacity and resources available in their universities to provide extra time in exams, while about half of staff members (54.55%) agreed there was. Lastly, staff (38.64%) and faculty members (34.83%) similarly reported that they were not sure whether their universities could provide students with learning disabilities with a computer to assist with written assignments and exams. Uncertainty among faculty and staff was expected in this regard, as this type of adjustment may require financial support which they may not be familiar with.

4.2.5.1.1 Comparing Differences Between Males and Females in Participants in Part IV of each Questionnaire.

Faculty members' questionnaire

100 Male and 78 female faculty members were compared in terms of their responses on the availability of capacity and resources regarding the provision of reasonable adjustments. Interestingly, most male, and female faculty members reported more similarities than differences in their responses. For example, they mostly agreed on the availability of capacity and resources at their universities in providing adjustments such as lecture notes (45% - 51.3%), alternative assignment formats (49% - 48.7%), alternative exam formats (42% - 37.2%), extra credit assignments (46% - 46.2%) and extra time in exams (37% - 35.9%). Also, most male, and female faculty members were not sure about the capacity and availability of resources at their universities in providing a note taker.

Staff members' questionnaire

By contrast, male (n=10) and female (n=34) staff members reported more differences than similarities in their responses regarding the capacity and the availability of resources at their universities in providing reasonable adjustments. For example, one notable difference was found in adjustment (3) as 40% of male staff members disagreed that there was an availability of capacity and resources at their universities to provide alternative assignment formats (e.g., oral presentations instead of written assignments), while 41.2% of female staff agreed that there was. More interestingly, male staff members were also divided in their responses about some types of adjustment, for instance, the male members equally disagreed and agreed on the capacity and resources available in their universities to provide alternative exam formats (40%) and extra credit assignments (40%) while the

women agreed (47.1% - 44.1%). By contrast, the male staff were not divided in their responses about capacity and resources available in their universities to provide different rooms for exams (50%) and extra time to complete coursework (60%). The next section presents faculty responses to Section B of their questionnaire.

4.2.5.2 Section B: Faculty's Interest Toward the Provision of Reasonable Adjustments.

This section was given only to faculty members (n=178) to explore their interest in the provision of reasonable adjustments to students with learning disabilities. To do that faculty members were given the following statement "Please, how would you describe your interest in providing reasonable adjustments?" 15 types of reasonable adjustments were listed on a five-point Likert scale (e.g., (1) Not interested; (2) Slightly interested; (3) Not sure; (4) Somehow interested; (5) Very interested).

As shown in next Table 4.20, most faculty members were 'very interested' in the provision of reasonable adjustments to students with learning disabilities. However, some adjustments were rated higher than other adjustments, for example, adjustments such as providing students with learning disabilities with lectures notes (46.6%, n=83) and allowing students with learning disabilities to tape-record the lecture (48.3%, n=86) were rated higher by more participants than adjustments such as item 5: allowing misspelling, incorrect punctuation, poor grammar in students with learning disabilities assignments (33.7%, n=60) and item 13: allowing students with learning disabilities to do extra credit assignments when this option is not available for other students (33.1%, n=59). Interestingly, some faculty members were

'somehow interested' in allowing students with learning disabilities to take an alternative form of examination (32.5%, n=58). This was interesting, as even though most faculty members agreed there was the capacity and resources available at their universities to provide alternative exam formats, only some of them were 'somehow interested' in providing this adjustment.

Table 4. 20: Faculty members' responses to Section B Part IV of their questionnaire

Are you interested in making the following adjustments?	Not interested	Slightly interested	Not sure	Somehow interested	Very interested
1. Provide students with learning disabilities with lectures notes before the beginning of the lecture.	8 4.49%	16 8.99%	24 13.48%	47 26.40%	83 46.63%
2. Provide students with learning disabilities with a large font size in presentations and exam questions.	6 3.37%	8 4.49%	28 15.73%	63 35.39%	73 41.01%
3. Allow students with learning disabilities to tape-record the lecture.	7 3.93%	16 8.99%	28 15.73%	41 23.03%	86 48.31%
4. Allow students with learning disabilities to have someone in class as a note taker.	12 6.74%	11 6.18%	33 18.54%	47 26.40%	75 42.13%
5. Allow misspelling, incorrect punctuation and poor grammar in students with learning disabilities' assignments.	10 5.62%	22 12.36%	29 16.29%	57 32.02%	60 33.71%
6. Allow students with learning disabilities to have someone as a reader during the exam.	13 7.30%	10 5.62%	32 17.98%	45 25.28%	78 43.82%
7. Allow students with learning disabilities to use a proofreader (someone to assist with language) for written assignments.	11 6.18%	16 8.99%	32 17.98%	50 28.09%	69 38.76%
8. Allow students with learning disabilities to use computers in class and in the exam to assist with written assignments.	8 4.49%	10 5.62%	32 17.98%	50 28.09%	78 43.82%
9. Allow students with learning disabilities to use a calculator in class and in the exam to assist with mathematics assignments.	10 5.62%	9 5.06%	30 16.85%	51 28.65%	78 43.82%
10. Allow students with learning disabilities to take the exam in a different room.	19 10.67%	9 5.06%	36 20.22%	44 24.72%	70 39.33%
11. Allow students with learning disabilities to extend the deadline for coursework.	8 4.49%	13 7.30%	27 15.17%	59 33.15%	71 39.89%
12. Provide students with learning disabilities extra time for exams.	9 5.06%	12 6.74%	29 16.29%	58 32.58%	70 39.33%
13. Allow students with learning disabilities to do extra credit assignments when this option is not available for other students.	15 8.43%	13 7.30%	43 24.16%	48 26.97%	59 33.15%
14. Allow students with learning disabilities to complete alternative assignment formats (e.g., oral presentations instead of written assignments).	6 3.37%	17 9.55%	31 17.42%	60 33.71%	64 35.96%
15. Allow students with learning disabilities to take an alternative form of examination (e.g., oral presentations instead of a written exam or multiple choice instead of essay tests).	9 5.06%	17 9.55%	29 16.29%	58 32.58%	56 36.52%

4.2.5.2.1: Comparing differences between male and female faculty members.

A notable difference was found between male (n=100) and female (n=78) faculty members. For example, although both male (44%) and female faculty members (50%) were very interested in providing students with learning disabilities with lecture notes before the beginning of the lecture; 39% of the men said they were 'somehow interested' in providing students with learning disabilities with a large font size for presentations and exam questions, compared to the women (48.7%) who were 'very interested'. Such a difference was also seen in allowing students with learning disabilities to have alternative assignments (item 14) and exam formats (item 15), as 42.3% and 24.3% of female faculty reported being very interested compared to the men who were somehow interested (35%, and 36%).

4.2.5.2.2: Comparing differences between faculty members based on their university locations.

Responses of faculty members (n=178) were also compared in terms of their university locations (north=20, south=50, middle=50, west=47 and east=11). Generally, most faculty members from different university locations reported being 'very interested' in the provision of reasonable adjustments, however, on some items, faculty members from particular university locations were more interested than others (i.e., items 5, 13 and 14). For example, regarding allowing misspelling, incorrect punctuation, and poor grammar in students with learning disabilities' assignments (item 5) faculty members from the southern (38%), western (36.2%) and eastern universities (45.5%) were 'somehow interested' compared to most faculty members from the north (50%) and middle universities (42%) who were 'very

interested' in providing this adjustment. Also, on item 13 (allowing students with learning disabilities to do extra credit assignments when this option is not available for other students), 32% of faculty members from middle universities were not sure, while 40% of faculty from northern universities were 'somehow interested' and faculty members from other locations reported being 'very interested' (southern 32%, western 36.2%, and eastern universities 63.6%). This was an interesting finding as I was not expecting to find that so many faculty from middle universities were not sure about their level of interest in this adjustment since most disability centres/units are located in middle universities. Lastly, on item 14 (allowing students with learning disabilities to complete alternative assignment formats) faculty members from the southern (38%) and middle universities (34%) reported being 'somehow interested' while faculty from the north (40%), western (36.2%), and eastern universities (63.6%) were 'very interested' in providing this adjustment. The next section summarizes the quantitative findings.

4.2.6 Summary of Section One

The quantitative results of this study (part one) show that most participants (faculty and disability centre/unit staff) conceptualised learning disabilities as a disorder in one or more of the basic psychological processes involving understanding and using written or spoken language. Also, most of them agreed that the term 'learning disabilities' refers to students who exhibit lower academic achievement than their peers even though they have above-average intelligence. However, regarding gender, even though most male and female faculty members understood there could be both low academic achievement and above-average intelligence, most of the male staff at the disability centres/units did not agree with

this. Also, even though most male and female faculty members agreed that learning disabilities were a result of another disability (e.g., visual or hearing impairment), most male and female staff members equally disagreed or were not sure about this.

Regarding the concept of reasonable adjustments, there was a lot of uncertainty among participants regarding this concept. For example, even though most faculty and staff members agreed that the term 'reasonable adjustments' described the adaptations made to instruction and assessment which allow students with learning disabilities to access the content being taught, most of the faculty and staff members were 'not sure' whether reasonable adjustments could negatively affect the academic performance standards of university programmes. Also, most male and female faculty and staff members at the disability centres/units reported uncertainty about the relationship between reasonable adjustments and academic standards. Interestingly, most faculty and staff members agreed on the existence of students with learning disabilities in Saudi public universities as well as believing in the rights of students with learning disabilities to have higher education with reasonable adjustments.

Regarding the level of collaboration between faculty and staff members as well as between disability centres/units and their universities, mixed perspectives were found. For example, most faculty members agreed that disability centres/units informed them about the needs of students with learning disabilities and helped them identify suitable reasonable adjustments. However, most faculty were unsure that the disability centres/units provided them with sufficient opportunities such as training and workshops. In return, most staff members agreed that faculty members were willing to attend courses and workshops presented by the disability centre/unit.

Regarding gender, most male staff members at the disability centres/units disagreed about the availability of staff who are experts in learning disabilities; though most female staff reported that their universities recruited disability centre/unit staff who are experts in learning disabilities. This finding shows the complexity of participants' responses regarding training and level of support.

The policy of reasonable adjustments was also a point of conflict in perspectives among most participants. For example, most faculty members were uncertain about their awareness and the effectiveness of this policy. They were also unsure if they had been given a written policy detailing reasonable adjustments. While most staff members agreed that their universities provide awareness of reasonable adjustments policy as well as agreed about the effectiveness of this policy. However, most staff were equally unsure and agreed about the clarity of reasonable adjustments policy at their Saudi public universities which may due to differences in university location. Lastly, most staff and faculty members agreed that there was the capacity and resources available in their university for providing most of the adjustments listed in their questionnaires. Also, most faculty were 'very interested' in the provision of reasonable adjustments to students with learning disabilities. The next section presents the results and the analysis of the qualitative data of the study.

4.3 Section Two: Qualitative Findings

4.3.1 Introduction

Section Two presents the main themes that emerged from the qualitative analysis. The qualitative data were collected through online semi-structured

interviews using Microsoft Teams. Participants of the interviews consisted of three groups: group one had eight faculty members, group two had seven staff members at disability centres/units, and group three had five students identified with learning disabilities. Groups one and two were recruited from participants who voluntarily agreed to take part in the interview during phase one of data collection (e.g., see the last part of questionnaires one and two). Group three was selected through using convenience sampling from local disability centres/units that had registered and identified students as students with learning disabilities (See Chapter Three, Section 3.6.4). Finally, the data were analyzed using Braun & Clarke's (2006) thematic analysis approach.

4.3.2 Demographic information of interviewees

4.3.2.1 Group One: Faculty Members

Eight faculty members (3 males and 5 females) from different university locations in Saudi Arabia participated in the interview. Two faculty members were from middle universities, two from northern universities, three from the west, and one from the east. In terms of their qualifications and specialisations, one of the faculty members was an associate professor who specialized in special education, and the other faculty members were lecturers who specialised in different majors.

Table 4. 21: Faculty members' demographic information

Participant	University Location	Qualification	Gender	Specialisation
Faculty 1	West	Lecturer	Female	Physics
Faculty 2	Middle	Lecturer	Female	Nursing
Faculty 3	North	Lecturer	Female	Food Science
Faculty 4	West	Lecturer	Female	Language and Communication Disorders
Faculty 5	Middle	Lecturer	Female	Nursing
Faculty 6	West	Lecturer	Male	Learning Disabilities
Faculty 7	North	Lecturer	Male	English
Faculty 8	East	PhD	Male	Learning Disabilities

4.3.2.2 Group Two: Staff Members

Seven staff members (2 males and 5 females) at disability centres/units participated in the interview. Three staff were from middle universities, two from western universities, one from the north, and one from the south. Eastern universities had no disability centres or units so there were no participants from there. Members of staff had different academic backgrounds and had different roles regarding their specialisation and professional roles. For example, two of the staff held a PhD, three held a bachelor's, and one held a master's degree. Most of the staff who participated in the interview specialised in special education, except one of the participants, who specialised in Islamic Studies. They had different roles as presented in the next Table 4.22.

Table 4. 22: Disability centres/units staff members' demographic information

Participant	University Location	Qualification	Gender	Specialisation	Role
Staff 1	Middle	PhD	Male	Developmental disabilities and ADHD	Centre director
Staff 2	North	-	Male	-	Unit director
Staff 3	South	Bachelors	Female	Special Education	Staff - Sign language Interpreter
Staff 4	Middle	MA	Female	-	Academic director for students with learning disabilities
Staff 5	Middle	Bachelors	Female	Special Education	Academic support for students with disabilities
Staff 6	West	PhD	Female	Special Education	Centre director
Staff 7	West	Bachelors	Female	Islamic Studies	Centre director

4.3.2.3 Group Three: Students with Learning Disabilities

Participating students with learning disabilities consisted of five female students from middle universities. This is because at the time of data collection there were only 3 males and 19 females registered at the disability centres/units as students with learning disabilities. These students attended western and middle Saudi universities while no students were registered in other regions at the time of data collection (See Chapter Three, Table 3.4.). All students were sent an invitation to voluntarily agree to participate but only students from middle universities agreed to take part. However, the five female students were from two different universities in the middle of Saudi Arabia (two students from University A and three students from University B). All students were bachelor students specializing in different subjects, except one student who was getting her diploma. For example, two students specialised in social work, two in public relations, and one was studying law. Regarding diagnosis, three students had a diagnosis before they entered university, however, the other two students did not have an official diagnosis until they finished their first academic year at university e.g., see the next Table.

Table 4. 23: Students' demographic information

Participant	University Location	Qualification	Gender	Specialisation	Time of Diagnosis	Time of receiving support	area (s) of learning disabilities
Student 1	Middle-A	Bachelor student	Female	Social work	Secondary school	First year	Reading and understanding of writing
Student 2	Middle-B	Bachelor student	Female	Law	University	Fourth term	Concentration, cognitive, and understanding
Student 3	Middle-B	Bachelor student	Female	Social work	High school	Second term	Reading and writing
Student 4	Middle-A	Diploma student	Female	Public relations	University	Second term	Reading and understanding
Student 5	Middle-A	Bachelor student	Female	Public relations	Secondary school	First year	Attention and concentrating

4.3.3 Themes and Sub-themes

The collected qualitative data from faculty, disability centre/unit staff, and students with learning disabilities were organized into six major themes and fifteen subthemes related to the research questions (as well as three emerging themes). The major themes were conceptualising learning disabilities and reasonable adjustments, discussing the availability of reasonable adjustments, interest toward the provision of reasonable adjustments, capacity and availability of resources of reasonable adjustments, reasonable adjustments policy and facilitators and barriers towards the provision of reasonable adjustments (see Table 4.24).

Table 4. 24: Themes and sub-themes of qualitative data analysis.

Theme	Sub-themes	Groups	Research question
1. Conceptualising learning disabilities and reasonable adjustments	1. The concept of learning disabilities	The concept of learning disabilities a) Conceptualising learning disabilities b) What can be seen as a learning disability?	RQ 2: How do faculty and staff members at disability centres/units understand the terms learning disabilities and reasonable adjustments in Saudi public universities?
	2. The concept of reasonable adjustments	The concept of reasonable adjustments c) The used terms d) Conceptualising reasonable adjustments e) What can be seen as "reasonable"? f) What can be seen as an "adjustment"?	
	3. What is the availability of reasonable adjustments?	The availability of reasonable adjustments g) The overall availability h) The availability based on groups.	
2. Discussing the availability of reasonable adjustments at Saudi public universities.	4. Additional types of adjustments	Why are reasonable adjustments needed in higher education?	RQ 1: How do students with learning disabilities, faculty and staff members at disability centres/units describe the provision of reasonable adjustments at Saudi public universities?
	5. Adjustments are still needed.	a) Considering individual differences b) Responding to diverse needs c) Equity in learning and teaching	
	6. Why are reasonable adjustments needed?		
3. Interest toward providing reasonable adjustments	7. Level of interest	Level of interest	RQ 3: To what extent and in what ways are faculty members interested in the provision of reasonable adjustments to students with learning disabilities in Saudi public universities?
	8. Reasons for their interest	a) Very interested b) Interested to some extent	

Table 4.24 Continued

Theme	Sub-themes	Groups	Research question
4. Capacity and resources regarding reasonable adjustments	9. Capacity	Capacity	RQ 4: How do faculty and staff members at disability centres/units describe the capacity and availability of resources regarding the provision of reasonable adjustments in Saudi public universities?
	10. Resources	Resources a) Human resources. b) Informational resources (courses and training). c) Financial resources.	
5. Reasonable adjustments policy at public Saudi universities.	11. The need for and importance of policy for reasonable adjustments	The need for and importance of policy for reasonable adjustments a) How policy is important b) The need for policy	RQ 5: What are the perspectives of students with learning disabilities, faculty, and staff members at disability centres/units about reasonable adjustments policies at Saudi public universities?
	12. The availability of a policy regarding the provision of reasonable adjustments.	The availability of policy a) Available b) Not available c) Lack of awareness d) Lack of application	
	13. How should the policy of reasonable adjustments be?	How should the policy of reasonable adjustments be? a) Inclusive b) Flexible c) Reasonable d) Clear e) Specialised f) Confidential	
6. Facilitators and barriers toward the provision of reasonable adjustments	14. Facilitators toward the provision of reasonable adjustments	Facilitators toward the provision of reasonable adjustments a) Disclosure of disability b) Disability recognition c) Effective communication and collaboration. d) Creating more disability centres/units e) Increasing awareness	RQ 6: What are the facilitators and barriers that students with learning disabilities, and faculty and staff members at disability centres/units recognise with regard to the provision of reasonable adjustments at Saudi public universities?
	15. Barriers limiting the provision of reasonable adjustments	Barriers to the provision of reasonable adjustments a) Inadequate knowledge b) Lack of awareness c) Misconceptions d) Tensions between equality and equity. e) Collaboration issues f) Lack of diagnosis	
Emerging Themes			
1. The inclusion of students with learning disabilities			Not related to the research questions.
2. The Admission policy			
3. The Diagnosis gap			

4.3.4 Theme One: Conceptualising Learning Disabilities and Reasonable Adjustments

Faculty members and disability centre/unit staff gave their thoughts on the concept of learning disabilities and reasonable adjustments and discussed what could be considered a learning disability or an adjustment. In addition, faculty members and disability centre/unit staff gave examples of what could be seen as reasonable or not regarding the term “reasonable adjustments” from their perspectives.

4.3.4.1 The Concept of Learning Disabilities

Through discussing the concept of “learning disabilities” with the interviewed faculty members and disability centre/unit staff, several ideas emerged about this concept (e.g., see Table 4.25).

Table 4. 25: Faculty members’ and disability centre/unit staff’s ideas of the concept of Learning Disabilities

Participants’ ideas on the concept of Learning Disabilities	Participant group		
	Faculty members	Disability centre/unit staff	Number of responses
1. Difficulty in reading	√√√√√	√√√	8
2. Difficulty in writing	√√√√	√√√	7
3. Difficulties related to the cognitive process, the attentional process, memory, or the psychological process.	√√	√√√	5
4. Difficulty in arithmetic	√	√√√	4
5. Difficulty in thinking	√√		2
6. Difficulty in learning	√		1
7. Difficulty in receiving information	√		1
8. Low academic achievement		√	1
9. Difficulty pronouncing		√	1
10. Different abilities	√		1

As shown in Table 4.25, a small number of participants (5 out of 15) referred to the term “learning disabilities” as difficulties associated with cognitive skills such

as difficulties in perception, attention, memory etc. An expert faculty member [8] in learning disabilities considered these cognitive problems to be a result of a disorder in one or more of the basic psychological processes. He expressed that “Learning disabilities are a disorder in one or more of the basic psychological processes, it may be developmental, or it may be academic, developmental in which mean perception, attention etc”.

This perspective was supported by another faculty member [6] who was majoring in learning disabilities. He stressed that “I fully believe that learning disabilities are processes related to three elements: [the cognitive process, the attentional process, and the psychological process]”. Similarly, a disability centre/unit director [1] referred to cognitive problems in describing the term “learning disabilities”. For instance, she [1] considered that “students with learning disabilities have good abilities in intelligence tests and cognitive matters, but they have certain problems in certain cognitive skills”. This finding was also supported by two of the disability centre/unit staff (staff 4 and 6) who pointed to problems in cognitive skills when conceptualising the term “learning disabilities”. For example, one of the disability centre/unit staff members [4] considered “difficulties in attention and memory as a part of learning disabilities”. This was similar to another staff member’s perspective, [6] a director of a disability centre/unit, who referred to difficulties in memory and attention when defining the concept of learning disabilities.

By contrast, about half of the interviewed participants (9 out of 15) viewed the term “learning disabilities” as difficulties related to the “academic context”. Some of those difficulties were described by participants as difficulties in reading, writing, mathematics etc. For example, one faculty member [7] who was an English lecturer

shared that “When I hear the term learning disabilities, I understand that a person has mental issues, meaning that they are not like other (students without disabilities), they have difficulty in thinking due to mental difficulties. And on the academic side, they have difficulties in reading and writing”. This finding was also supported by two of the faculty members (4 and 8) who conceptualised “learning disabilities” in terms of reading and writing disabilities. For example, faculty member [4] who was majoring in language and communication disorders, said: “I think individuals with learning disabilities are people who have trouble in reading and writing”.

Also, another of the faculty members [8] indicated in the following statement that “Learning disabilities is a disorder in one or more of the basic psychological processes, it may be developmental, or academic. On the academic side, it may be in reading, writing, mathematics etc. Likewise, a few disability centre/unit- staff members (e.g., 3 out of 7) considered the idea of reading and writing disabilities in conceptualising “learning disabilities”. For example, one of the disability centre/unit staff members [3] majoring in sign language stated that “To be honest, my background is very limited in terms of learning disabilities, but what I know is that they are those individuals who have deficiencies in basic skills such as reading, writing and arithmetic”. Also, one of the disability centre/unit staff members [staff 4] who was the academic director for students with learning disabilities, described students with learning disabilities as students who had “low academic achievement due to a disorder or defect in their nervous centre”. And one of the disability centre/unit staff members [staff 6] referred to difficulties in reading, writing, and arithmetic as a part of the term “learning disabilities”.

Nevertheless, a small number of faculty and disability centre/unit staff (3 out of 15) conceptualized “learning disabilities” from different perspectives. For instance, one of the faculty [5] described learning disabilities as “a physical or mental impairment that causes limitation in the daily activities of a person”. This was an interesting finding as the participant did not limit the concept of “learning disabilities” to either “cognitive” or “academic” problems. However, she conceptualised this term from a wider point of view that considered “learning disabilities” as a disability that could affect all daily activities of the person. Also, another faculty member [3] stressed that learning disabilities were “difficulties in education, whether mental/intellectual difficulties or sometimes physical disabilities”. These different perspectives may have been because these faculty members specialised in different majors. For example, the first faculty member was majoring in food science, and another faculty member was a lecturer in nursing. Another interesting finding was stated by one of the disability centre/unit staff [2] who considered “learning disabilities” as a concept that referred to students who may have “difficulty in pronunciation”.

4.3.4.2 What can be seen as a learning disability?

A small number of the faculty members and disability centre/unit staff members (4 out of 15) gave some thought to what could be considered or was the cause of learning disabilities. Thus, from their perspectives, not all problems which resulted from “cognitive” or “academic” problems could be considered or caused a learning disability. Instead, three main aspects needed to be considered before identifying a person as having a learning disability (e.g., see Table 4.26).

Table 4. 26: Shows faculty and disability centres'/units' perspectives on what can be seen as a learning disability.

Participants' main points	Participant group		
	Faculty members	Disability centre/unit staff	Number of responses
1. Not resulting from issues related to intelligence	√	√√	3
2. Not resulting from another disability (e.g., hearing, or visual impairment)	√	√	2
3. Not resulting from family or psychological reasons	√	-	1

One faculty member [4] gave an example of who could be seen as a student with a learning disability by stating the following:

I think that students with learning disabilities are those individuals who have problems with reading and writing that are not related to their IQ scores “Intelligence Quotient”. The IQ scores can be average, I mean, not low, or related to the intellectual disability, for example, I mean their IQ is above average, like the IQ of ordinary children, but they have problems with reading or writing.

The idea of “IQ score” was also expressed by one of the disability centre/unit directors [staff 1] who emphasized that “The problems in cognitive skills that may affect students’ academic achievement are not due to problems with intelligence”. This finding was supported by another disability centre/unit director [staff 6] who stated that “Students with learning disabilities must have an IQ score as a part of diagnosis”. She explained that “Before being registered at the centre, students with learning disabilities need to have their IQ score, if they don’t have one, the centre can provide them with an IQ test”.

The other two points that were mentioned by participants were that learning disabilities should not be a result of “another disability” or “family and psychological issues”. Two participants expressed that learning disabilities were not caused by

another disability. For example, one of the disability centre/unit staff members [4] stressed that “Learning disabilities are not a result of another disability such as hearing or visual impairment”. Also, another faculty member [8] mentioned that the Saudi definition of learning disabilities stated that “learning disabilities do not result from family reasons, psychological reasons, visual impairments, or hearing impairments”. This suggested that from the participants’ perspectives, to consider that a student had a learning disability, students’ difficulties (e.g., reading and writing difficulties) were not a result of issues related to family, psychology, or intelligence.

4.3.4.3 The Concept of Reasonable Adjustments

Part two of theme one was about discussing participants’ points of view about the concept of reasonable adjustments, and what could be seen from their perspectives as “reasonable” or an “adjustment.” “Reasonable adjustments,” was an unknown concept to most of the faculty members (6 out of 8), and they expressed their perspectives about the concept of “reasonable adjustments” as follows:

I don’t know this concept [faculty members 1 and 2]

This is the first time I’ve heard this term [faculty member 3]

I have no experience of this [faculty members 4 and 5]

I don’t know this concept [faculty member 7]

Despite the lack of understanding of the concept of “reasonable adjustments” among faculty members, three of them (faculty members 4, 5, and 6) gave some examples of what “reasonable adjustments” meant from their points of view. For example, one faculty member [4] mentioned that “I had no experience of this, even when the university emailed us about its policy. However, from my point of view, reasonable adjustments mean adapting the curriculum or changing the method of

teaching or exams.” This perception was supported by another faculty member [5] who stated that “I previously looked at the Students’ Guide, but I do not remember having any experience of reasonable adjustments. But from my point of view, reasonable adjustments are anything that helps students be successful at university, improve their chances of learning, and increase their outcomes.” Moreover, one faculty member [6] added that “I think reasonable adjustments referred to support services or services provided by universities”. Considering both points of view, this suggested that faculty members may conceptualize the term “reasonable adjustments” as changes in “teaching methods” that may allow students with learning disabilities to be more successful in higher education.

By contrast, most of the disability centre/unit staff (e.g., 4 out of 7) were able to give some thoughts about the concept of reasonable adjustments, but in different ways. First, participants gave examples of what terms they used at their universities or disability centres/units (e.g., see table 4.27).

Table 4. 27: Examples of terms used for reasonable adjustments at Saudi public universities by disability centres/units.

Terms	Participant group	
	Disability centre/unit staff	Number of responses
1. Educational adjustments, in Arabic <i>almua'amat al'akadima</i> – <i>المواعمات الأكاديمية</i>	√√√	3
2. Reasonable adjustments	√	1
3. Facilitation, in Arabic <i>altashilat</i> - <i>التسهيلات</i>	√	1
4. Educational services, in Arabic <i>alkhidmat altaelimia</i> - <i>الخدمات التعليمية</i>	√	1

As shown in Table 4.27, the term “educational adjustment” was mostly used at Saudi public universities as described by participants. For example, a disability centre director [staff 1] expressed that “We use more than one concept to refer to reasonable adjustments as stated in the manual and regulatory procedures which

are reasonable adjustments and 'educational adjustments' which in Arabic is '*almua'amat al'akadima* – *المواعمات الأكاديمية*'. She justified this with the following statement, "We use the two terms interchangeably, but we say, 'reasonable adjustments' and 'educational adjustments', almost by which we mean the same thing that we could offer from an academic point of view". For example, we usually separate them, but the term we currently use is 'educational adjustments' *almua'amat al'akadima*, but the manual and regulatory procedures included both terms". This perspective about the used term was also supported by another disability centre/unit staff member [4] who mentioned that the "term 'reasonable adjustments' was not used in our disability centre". Instead, the term "educational adjustments" - *المواعمات الأكاديمية* was used. By contrast, two different terms were mentioned by two staff members from two different disability centres/units. For example, one disability centre/unit staff member [3] mentioned that "In our centre, we use the term [Facilitations] which is named in Arabic as *altashilat*-*التسهيلات*. Another term was stated by another disability centre/unit staff member [7] who referred to "reasonable adjustments" by using the term "educational services" which is named in Arabic as *alkhidmat alkalemia* - *الخدمات التعليمية*.

As regards defining the term "reasonable adjustments" or any of the terms above, only a few of the disability centre/unit staff (2 out of 7) gave a clear definition. A disability centre director [staff 1] conceptualised the term "reasonable adjustments" as "reasonable efforts to modify the requirements". For example, she indicated this in the following statement "The term reasonable adjustments means the reasonable efforts to modify the requirements". Also, another disability centre/unit staff member [3] defined the term "reasonable adjustments" as a "way of helping". For example,

she expressed that “I considered reasonable adjustments as a way of helping students with disabilities in a way that did not affect students without disabilities.”

4.3.4.4 What can be seen as “reasonable” or an “adjustment”?

Faculty members and staff members at disability centres/units were asked to explain from their points of view what could be seen as “reasonable” or an “adjustment”. Regarding what could be seen as “reasonable”, some of the faculty and disability centre/unit staff members (4 out of 15) considered that what was reasonable, was what did not conflict with either the “learning outcomes” or “academic standards” (e.g., see table 4.28).

Table 4. 28: Participants’ perceptions of the term “reasonable.”

Perceptions of the term “reasonable”	Participant group		
	Faculty members	Disability centre/unit staff	Number of responses
1. Does not conflict with learning outcomes	√	√√	2
2. Does not conflict with academic standards	-	√	1
3. Does not conflict with other students in the same learning environment	-	√	1

As shown in Table 4.28, “learning outcomes” had an important role in considering what could be seen as “reasonable” adjustments from participants’ perceptions. For example, one of the faculty members [2] who was lecturing in nursing described “reasonable” as “what does not conflict with their learning outcomes”. This finding was supported by another disability centre/unit staff member [staff 5] who stressed that what was reasonable was what “did not impact on learning outcomes”. She justified this as the following:

University is not like school as there are certain outcomes that must be evident ... so we need to make sure the student's outcomes were not because

of providing reasonable adjustments. For example, we used to convert essay questions into objective questions (e.g., providing alternative exam formats), but now we don't do that. Instead, we ask faculty members to provide this adjustment. In the end, the course is their responsibility, and they are the ones who know how to fit and adapt this course in proportion to the student, in a way that does not affect the learning outcomes. This especially applies at university, where specific outcomes must be evident.

Moreover, another disability centre/unit staff member [staff 6] indicated the importance of considering the “learning outcomes” during providing reasonable adjustments by stating “The problem now is how do I adapt a curriculum to facilitate reasonable adjustments without deleting a large part of it? How do I adapt the test questions to the disability and not make the test easier?”. Additionally, academic standards have been taken into consideration by one of the disability centre/unit staff members [1] who stressed that “We need to make sure that adjustments do not conflict with standards, and if the adjustments are going to conflict with the standards, this is not reasonable”. For example, she justified this through the following statement:

The reasonable is which does not touch or change the academic standards, or the academic outcomes, whether for the test or the program in general ... To the extent that equal opportunities that do not affect the nature of the target that I want.

Another staff member [3] also stressed that the provision of reasonable adjustments must not affect other students in the same learning environment (e.g., students without disabilities). For example she explained this as follows:

I think that reasonable adjustments are made so that there is no harm to ordinary people (e.g., those in the same learning environment) and people

with disabilities, regardless of their disability. This means that from the viewpoint of a student with a learning disability he is like his peers, he does not see a difference in this adjustment, and at the same time, his peers do not see that there is a difference that affects them whether it is in curricula or adjustments that make them feel bored, or that they feel that task is too easy for them ... So that they do not harm both parties; do not do injustice to ordinary people, and do no injustice to people with disabilities in the simplest possible form.

As shown above, “learning outcomes” and “academic standards” were considered by many participants, however, this approach was also criticised by one of the faculty members [8] who stressed that “The quality standards did not take into consideration individuals with disabilities”. For example, he explained that “One of the quality standards related to exams stated that at least 60% of the exam questions must be multiple choice and essay-type questions which unfortunately did not take into account those with disabilities”. This meant that the quality standards related to exams did not consider the reading and writing difficulties of students with learning disabilities.

On the other hand, a small number of faculty and disability centre/unit staff members (2 out of 15) gave examples of what could be seen as an “adjustment” from their points of view. For example, one of the faculty members [3] considered providing students “with large font size” and “extra time” as an adjustment. Another faculty member [4] stated that providing “alternative exam formats” and “extra time on exams” could be considered an adjustment. She explained that “If I see that there is a group of students who have problems in essay exams, I will provide them with alternative exam formats, e.g., multiple choice exam questions. Also, if students need more time, I will provide them with that; I believe all of these could be

considered adjustments”. Moreover, another faculty member [5] stressed that what counted as an adjustment was dependent on “the environment”. For example, she justified that at university, they could provide students with “extra time”, allow students to “present in a separate room”, and “read the exam question” to students, but in another environment “e.g., in a hospital during student training” this could be difficult.

4.3.5 Theme Two: Discussing the availability of reasonable adjustments at Saudi public universities.

In discussing the availability of reasonable adjustments, participants were asked about the availability of reasonable adjustments at their universities, as well as adjustments that were seen as needed but were still not available to students with learning disabilities. In addition, participants gave their thoughts on why reasonable adjustments were needed in Saudi public universities.

4.3.5.1 Why are reasonable adjustments needed?

Participants considered that reasonable adjustments were needed in higher education to deal with the “individual differences” among students with learning disabilities as well as responding to their “diverse needs”. Moreover, participants emphasised that there was a need to provide students with learning disabilities with “fair” not “equal” educational opportunities (e.g., see table 4.29).

Table 4. 29: Participants’ perspectives on the need for reasonable adjustments

Participants’ perspectives	Mentioned by participant group			Number of responses
	Faculty members	Disability centre/unit staff	Students with learning disabilities	
1. Individual differences e.g., differences in understanding, attention, and achievements.	√	√	√	41
2. Diverse needs e.g., the need for extra time, a note taker, a reader, and alternative assignment formats in exam and coursework.	√	√	√	38
3. Fairness e.g., equal opportunities, rights, facilitating studies and increasing grades	√	√	√	13

4.3.5.1.1 Considering the individual differences among students with learning disabilities

The first reason for considering that reasonable adjustments were needed in higher education was to deal with “individual differences” among students with learning disabilities. As emphasised by one of the faculty members, [8] “Every person has individual differences ... if there is no consideration of these differences, there is no enabling for these students to channel/harness their energies and reach their potential. I think that if there is no consideration, we have wronged them in one way or another”. As explained by participants, these “individual differences” which needed to be considered could be placed under three different types e.g., see Table 4.30.

Table 4. 30: Participants’ points of view on “individual differences”.

Individual differences	Participant group			Number of responses
	Faculty members	Disability centre/unit staff	Students with learning disabilities	
1. Differences in understanding	√	√	√	14
2. Differences in attention	√	-	√	4
3. Differences in achievement	√	√	√	21

Differences in understanding and attention.

From participants' perspectives, differences in "understanding" and "attention" needed to be considered during the learning and teaching of students with learning disabilities (12 out of 20 participants). This is because difficulties in "understanding" or "attention" could negatively influence students' abilities to access and perceive information. "Differences in attention" were explained by one of the faculty members [1] as difficulties for the students in maintaining focus during their studies. For example, he stated that "It seems that students with learning disabilities are looking at you, but it feels like they are not with you, and they are not focusing". Similarly, one student with learning disabilities [5] described "differences in attention" as complications in attention and concentration. This perspective was also supported by another student with learning disabilities [2] who described "differences in attention" as she struggled to keep concentrating during lessons. For example, she explained that "During the lecture, I have difficulty concentrating, and I feel that my attention is drifting". Moreover, two of the interviewed students with learning disabilities [students 2 and 5] gave examples of how these difficulties in attention (e.g., difficulties related to attention and concentration) could influence their learning process. For example, one student [2] mentioned that "I can be easily distracted during lectures, and I cannot understand what my teachers try to explain". Another student [5] shared that "It is difficult for me to sit down and memorise four lectures in one day. I must divide the exam into two days so that I concentrate on studying for the exam".

Likewise, "differences in understanding" were explained by one of the participating students with learning disabilities [4] as problems with understanding

and processing information. For example, she stated that “Some individuals could understand a topic very quickly, I cannot, I need it to be explained and repeated several times”. She also mentioned that “I do not understand the lessons from the first time; there are some points that I need someone to repeat for me”. Similarly, two faculty members (faculty 5 and 7) described “differences in understanding” as difficulties in understanding information. For example, one faculty member [7] mentioned that “What I have noticed about these students (e.g., with learning disabilities) is that they have difficulty in understanding”. And he explained that “When I compared them to other students (e.g., their peers), they may only understand about only 10% of the lesson”. Also, another faculty member [5] shared an experience with one of the students with learning disabilities. She mentioned that “I had a student with a learning disability who was very good at written exams but had difficulties in understanding”. And she explained, “During the lectures, I noticed that she did not understand me very quickly and took a long time to understand what I was saying”.

Furthermore, the negative influence of difficulties in understanding was discussed by some students with learning disabilities and disability centre/unit staff members (4 out of 13). For instance, one student with learning disabilities [2] explained the effect of “differences in understanding” on her ability to access the lecture as follows: “I have difficulties in cognition and understanding, thus sometimes I don't understand what my teachers are trying to explain”. This perspective was also supported by another student [4] who stated that “When I read a question, I do not understand it, and thus I need someone to read it for me. And, when someone reads the question for me, I understand it, and can answer it”. Additionally, a disability

centre/unit staff member [3] gave an example of how these differences (differences in understanding) could affect the learning of students with learning disabilities (ability to perceive information). For example, she mentioned that “students with learning disabilities might have difficulty understanding a text, even if the text is very simple”. This finding was supported by another disability centre/unit staff member [staff 5] who commented:

Sometimes students with learning disabilities have the answer, but they have difficulty perceiving the question. As soon as the faculty member explains the question to the student, she finds a solution, gets the idea, and may answer the question. Especially in the final exam, if the faculty member did not read the question for the student, the student will have a big problem. It is possible that if she did not understand the questions, she may not answer them, which may affect her grades.

Differences in achievement

“Differences in achievement” that needed to be considered were difficulties due to students’ reading and writing abilities, not because of issues such as being an “indolent” or an “undiligent” student (13 out of 20 participants). To clarify, one of the faculty members [4] defined differences in achievements as difficulties in academic achievements despite students with learning disabilities' efforts to be successful in their studies. For example, she explained that “Students with learning disabilities are not indolent; on the contrary, they are present and diligent in the class”. Differences in achievements were also described by a disability centre/unit staff member [1] as struggles to academically achieve the same as other students (without disabilities). For example, she explained that “Even though students with learning disabilities are diligent and put in more time, energy, and effort compared

to their peers, their grades go down not up". This finding was also supported by one interviewed student with learning disabilities [2] who stated that "My grades go down, not up, and I failed in some classes a few times".

Furthermore, examples of difficulties in achievement related to students' reading and writing abilities could be located in students' reading or writing skills. On the one hand, the "writing skills" of some students with learning disabilities were explained by one of the faculty members [4] as limited, especially regarding skills such as expressing ideas, organizing thoughts or essay writing. For example, she justified this as follows: "I taught bachelor's students for three years, and what I noticed about these students (e.g., with learning disabilities) is that they had difficulties with essay questions, essay assignments, and expression". This was also supported by another faculty member [8] who described the "writing skills" of some of those students (e.g., with learning disabilities) as follows:

I had a student who I personally think had some learning disabilities based on a simple experience with her. Although it is not permissible for me to judge her through this experience, I think that she mentioned it. In one of the simple tasks, it took her four attempts to modify the task even though the idea of the task was fairly simple.

Moreover, one student with learning disabilities [2] stated that "As a law student, most of my exams were essay questions which needed more writing and that was challenging for me". Also, another interviewed student [3] emphasised that "The biggest part of my difficulties is in reading and writing. I do not write a lot and my writing is so slow that I need someone to write the lectures for me". On the other hand, the need to consider the "reading skills" of students with learning disabilities

was discussed by a few participants (2 out of 13). For example, one of the disability centre/unit staff members [3] considered the “reading skills” of students with learning disabilities as limited especially in reading comprehension. She explained that “Students with learning disabilities have limited reading skills, so that it is difficult for them to understand a text, even if the text is short and simple”. This perspective was supported by another student [1] who expressed her reading skills as follows: “I cannot read a long text, and when I read, I may start stuttering”.

4.3.5.1.2 Responding to the diverse needs of students with learning disabilities.

Adjusting the learning environment to meet the “diverse needs” of all students, including students with learning disabilities, was another reason for the need for reasonable adjustments. From the participants’ perspectives, for students with “developmental disabilities, including students with learning disabilities, reasonable adjustments are what they need the most”. In other words, “the most important things that students with learning disabilities need, in general, are reasonable adjustments” [staff 1] (See Table 4.31).

Table 4. 31: The “diverse needs” of students with learning disabilities as described by participants.

Needs	Mentioned by participant group			Number of responses
	Faculty members	Disability centre/unit staff	Students with learning disabilities	
1. Need for more time	√	√	√	13
2. Someone to read	√	√	√	6
3. Someone to take notes		√	√	5
4. Different exam format	√		√	5

Table 4.31 Continued

Needs	Mentioned by participant group			Number of responses
	Faculty members	Disability centre/unit staff	Students with learning disabilities	
5. Different room for exams	√	√	√	3
6. Different assignment format	√		√	2
7. Large font size	√		√	2
8. Lecture notes before the lecture			√	1

As shown in Table 4.31, participants mentioned some different needs of students with learning disabilities that may needed to be considered by Saudi public universities. As emphasised by one faculty member [2] “Yes, those needs are different from the needs of the rest of other students, but it remains a need for this student (e.g., with learning disabilities). As explained in the following:

The academic needs of a student with learning disabilities are greater than the needs of any disabled student who gets accepted into the university. For example, for a student who has a motor disability and a student who has a learning disability, the student with a learning disability will request more adjustments than the first student who does not have a learning disability [staff 5].

For example, as stressed by 7 out of 20 participants, the need for “more time” (e.g., extra time to complete exams or coursework) is one of the greatest needs of students with learning disabilities. One of the faculty members [8] explained that “I had a student who took 10 minutes to complete a one simple task ... if I had the choice, I would at least give her more time to answer the questions”. Another faculty member [4] shared that “During exams, students with learning disabilities find it difficult to answer essay questions so they need more time”. The need for “more

time” was also supported by one of the interviewed students with learning disabilities who made the following statement:

It is difficult for me to be like other students. For example, it is difficult for me to submit my coursework on time like other girls ... I know university study is different from general education with more requirements and responsibilities, and I know that as a university student, I have to take responsibility, but I hope there will be more assistance or facilitation.

The need for “more time” on exams and coursework was also explained by a student with learning disabilities who said “I am slow on reading and writing and thus one hour is not enough for me during the exams... the lecture is only an hour or half an hour, so the assignment has a time limit of half an hour to complete, which is difficult for me to do” [student 4]. This perspective was supported by members of staff who said “Of course, a student who has learning difficulties needs more time than the other students; because it takes them longer to submit their coursework on time, especially if they have many courses” [staff 5]. So, “some of the adjustments that students with learning disabilities need are ‘more time’ during exams and more flexibility (e.g., extra time) in submitting their coursework” [staff 1].

Providing students with a “reader” (e.g., someone to read for the students) was another “need” discussed by participants (5 out of 20). One of the students with learning disabilities described her need for a “reader” by stating “during exams, I start to get nervous and get scared, thus I need someone to read the exams questions for me”. And she explained, “When I read a question, I do not understand it, and then I need someone to read it for me. When they do, I understand it and can answer it”. The need for a reader was also supported by another student with

learning disabilities [3] who shared that “During exams, I don’t have a “reader”, so I must read and understand the questions myself which honestly was a barrier. I need someone to explain the questions to me”. Similarly, a few faculty members and disability centre/unit staff (3 out of 15) gave their thoughts about the need for a “reader” for some of their students with learning disabilities. For instance, one of the faculty members [5] stated that “I had to read the exams questions for one of the students with learning disabilities in my class. Yes, it was a different need of the rest of the students, but it remains a need for this student, and I must address it”. This finding was supported by a disability centre/unit staff member [5] who described the need for “a reader” as one of the characteristics of students with learning disabilities. For example, she explained this by stressing: “The need for someone to read the questions for those students (with learning disabilities) is one of their characteristics”.

In addition, the need for “someone to take notes” (4 out of 20 participants) and a “different exam format” (5 out of 20 participants) were two “different needs” discussed by participants. For instance, one student with learning disabilities [3] emphasised the need for a note-taker during lectures as follows: “I do not write a lot and my writing is so slow that I need someone to write the lectures for me”. And one of the disability centre/unit staff members [4] emphasised the need for a “note-taker” by stressing that:

Students with a learning disability always need a "note-taker". If they do not have a "note-taker" or someone to help, they will face frustration in doing the assignments, studying, and adapting the curriculum. Thus, students with learning disabilities cannot be self-reliant; they need help in taking important notes, so there is a task for them, and that is to have a "note-taker".

Furthermore, one student with learning disabilities [1] explained her need for a “different exam format” by mentioning how it was difficult for her to “take the same exams as normal students”. She said: “I need special exams. Before I was registered at the disability centre, my exams were like other girls’, so I didn’t answer well, but after joining the centre, they prepared exams for me, and I got good grades”. This finding was supported by another student [4] who shared her need for “a different exam format” as follows:

The best questions I can answer are multiple, and true and false questions. These things I am very good at, I mean I can answer them, I am not afraid of them. But questions that involved giving definitions examples, and explanations, which required a lot of writing made me tired.

Moreover, the need for “different rooms for exams” and “different assignment formats” was described as a need to be considered. For example, the need for a “different room for exams” was discussed by 3 out of 20 participants. One of the faculty members [8] stated that it was critical for students with learning disabilities to have a “different room for exams”. He stated that “Some students may have difficulties in taking the exam in the same rooms as their peers”. To add to this, one disability centre/unit staff member [staff 7] explained that “During exams, students with learning disabilities take their exams at the centre as these students need a quiet place”. Also, the need for a “different assignment format” was an important need for students with learning disabilities. For example, one faculty member commented that she had a student with a learning disability who requested doing her presentation alone instead of presenting with other students. She [faculty 8] explained that:

I refused to allow her to present alone, because I thought that would help her overcome her learning disability, and I did not understand what learning disabilities meant. The next day she was absent from class because she refused to present in front of the students.

Similarly, another student with learning disabilities [student 3] explained that the need for a different “assignment format” was critical to meet students’ differences. She justified this by stating that:

In doing projects and research, for example, people who do not care about you in this matter see you as a university student and that you must do these things. As a student with a learning disability, I cannot do these things. I am not the type of student who can do research, projects, or presentations in front of students. If they don't understand this, all of these will be deducted from my grades.

The need for “large font size” and “lecture notes before the lecture” was emphasised by faculty members (1 out of 8 participants) and students with learning disabilities (2 out of 5 participants). One of the faculty members stated that “adjustments such as large font size was necessary” to meet the needs of these students. Also, another student [student 3] stressed that “I have learning disability (i.e., reading and writing disabilities) and I have visual impairment, and thus I need “a large font size”. Another student [student 4] explained her need to access “lecture notes before the lecture” by stating that “For example, some professors do not send you the lecture notes until the exam day. I mean, tomorrow is the exam, they send them today. I can't study all the lectures in one day, I need the notes to be sent to me at least three days, four days, or a week before the exam day”.

4.3.5.1.3 Equity in learning and teaching students with learning disabilities

From the participants' points of view (6 out of 20 participants), the third reason for considering the need for reasonable adjustments was to provide students with learning disabilities “equity” in their education. One faculty member [8] asked “Is justice a generalization of equality or not? I think we must be fair and not equal in the way we teach, test, or evaluate. There is a need to provide students with learning disabilities with ‘equity’, so that they are equal to the people who have full abilities” [faculty member 2]. “It is not permissible to deal with a student with learning disabilities and another student in the same way and with the same procedure. Each person has a certain way of thinking, a certain way of memorizing, a certain way of understanding, and a certain way of studying” [faculty member 8]. So, it is important to consider the “equity” in the learning of students with learning disabilities through considering their learning needs. In other words, we must teach according to the learning needs of those students (e.g., students with learning disabilities) in a different way”. [faculty member 8]. This was explained by one disability centre/unit staff member [1] as follows:

Due to the nature of a disability, sometimes students need an adjustment so that they can get an equal opportunity with their peers, not a higher or a lower chance. I mean, if I help the student, I give him a better chance than his peers, but If I give him an adjustment, I give him a chance so that they can have an equal opportunity.

Considering “equity” in teaching or evaluating students with learning disabilities was also stressed by two faculty members (2 and 4). For example, one faculty member [2] indicated that students with learning disabilities may need more time than the typically required. They need an increase in time; to give them a chance

to achieve the desired achievement”. Moreover, she expressed that “In my opinion, we're giving them extra time; so that they are equal to the people who have full abilities, and this may increase their productivity and enable them to reach the desired goal”. This was also supported by another faculty member [4] who considered the need to be more equitable in evaluating students with learning disabilities. For instance, she said:

Some of my exam questions are essay questions. A group of students always told me: Professor, we are not able to take the essay tests and I was surprised, of course sometimes I didn't listen to the students and still gave essay questions, thus their grades were low in this part. So, we went back to the level of improvement again; because it was true, I discovered that this group of students literally didn't have good expression skills. So, it was difficult for them to answer (essay questions) and they required more time, and I see that it was one of “their rights”.

4.3.5.2 What is the availability of reasonable adjustments?

Section two of theme two discusses the extent to which reasonable adjustments were available at public Saudi universities from participants' points of view (faculty members, disability centre/unit staff, and students with learning disabilities). The availability of reasonable adjustments was first discussed based on the perspectives of all participants and then based on each group's viewpoints. Moreover, students with learning disabilities gave their thoughts on the adjustments that were seen as needed but were still not available to them.

4.3.5.2.1 The overall availability of reasonable adjustments

Participants (faculty, disability centre/unit staff, and students with learning disabilities) discussed the extent to which reasonable adjustments were available at

public Saudi universities from their points of view. Participants were asked to state the type of adjustments that were available at their universities at the time of the interview. 11 types of adjustments were referred to by participants from different groups as available e.g., see table 4.32.

Table 4. 32: The available types of reasonable adjustments as described by participants.

Adjustments	Availability based on participant group			Number of responses
	Faculty members	Disability centre/unit staff	Students with learning disabilities	
1. Extra time on exams	√√√√	√√√√	√√√	11
2. A 'reader' (e.g., someone to read the exam questions for students)	√	√√√	√√√√	8
3. Different room for exams	√	√√√√	√√	7
4. Extra time to complete coursework	√	√√√√	√√	7
5. Alternative exam formats (e.g., oral presentations instead of a written exam or multiple choice instead of essay tests)		√√	√√√√	6
6. A 'note taker' (e.g., someone to take note of the lecture for students)		√√	√	3
7. Alternative assignment formats (e.g., oral presentations instead of written assignments)		√	√√	3
8. Large font size on presentation and exam questions	√		√	2
9. Lecture notes before the beginning of the lecture			√√	2
10. Extra credit assignments			√	1
11. A computer to assist with written assignments and exams			√	1

At the top of the table were adjustments that were the most reported by participants from all three groups (e.g., faculty members, disability centre/unit staff, and students with learning disabilities). For example, the availability of “extra time on exams” was the adjustment the most stated by participants from all three groups (e.g., 11 out of 20 participants). Similarly, the availability of a “reader” (which was

about providing someone to read the exam questions to students) was stated eight times (1 faculty member, 3 disability centre/unit staff, and 4 students with learning disabilities). And equally adjustments like different rooms for exams, and extra time to complete coursework were reported by 7 out of 20 participants from all three groups.

Next in the table, were those adjustments mentioned less and only by participants from two groups out of the three groups. For instance, alternative assignment formats such as allowing students to do oral presentations instead of written assignments, or written assignments instead of oral presentations were mentioned six times (2 out of 7 disability centre/unit' staff and 4 out of 5 students with learning disabilities). Also, the availability of adjustments such as having access to a 'note taker' and alternative assignment formats was only mentioned three times by participants from two groups (e.g., disability centre/unit staff and students with learning disabilities).

At the bottom of the table were adjustments that were only mentioned by a few participants from only one group. For example, the availability of a computer to assist with written assignments and exams was only referred to twice (e.g., by one student and one disability centre/unit staff). Also, the availability of adjustments such as lecture notes before the beginning of the lecture and extra credit assignments were only mentioned by the interviewed students with learning disabilities.

4.3.5.2.2 The availability of reasonable adjustments based on each group's perspective.

The availability of reasonable adjustments based on each group's viewpoints was discussed as each group of participants explained the availability of reasonable adjustments from different perspectives.

Faculty Members

Faculty members were divided in their perspectives about the availability of reasonable adjustments, as some considered that there was “some availability” while others stated that reasonable adjustments were “not available” or “not existing”. On the one hand, the first half of faculty members stated that there was some availability of reasonable adjustments (e.g., see table 4.33), however, the availability of these adjustments was mostly based on “personal diligence”.

Table 4. 33: The availability of reasonable adjustments based on faculty members' perspectives.

Adjustments	Faculty members	University location	Number of responses
1. Extra time on exams	faculty 1, 4, 5, 6	Middle & West	4
2. A 'reader' (e.g., someone to read the exam questions for students)	faculty 5	Middle	1
3. Different room for exams	faculty 1	West	1
4. Extra time to complete coursework	faculty 6	West	1
5. Large font size on presentations and exam questions	faculty 4	West	1

One of the faculty members [1] described that more adjustments had started to be offered in their university. For example, she stated that “students with learning disabilities have begun to take their exams at the disability centre (e.g., different room for the exams) and have begun to be provided with “extra time on the exam”.

Another example of the availability of reasonable adjustments was providing students with “extra time on the exam” and “a reader” [faculty member 5]. Moreover, two more adjustments were providing students with a “large font size” and “extra time on exams”.

However, the availability of these adjustments as explained was “not based on the university policy” [faculty member 5] but instead was “based on personal diligence” [faculty member 4]. The idea of “personal diligence” was explained by one of the faculty members [5] as follows:

My university was encouraging us to provide reasonable adjustments such as extra time on exams and reading the exam questions for students, but was it available to other students? Or even was it written? I believe this was based on personal diligence, not on the university policy. I don't know if these adjustments existed within the university's policy, but what I saw was that those adjustments were given based on the “faculty members' diligence”.

Furthermore, another faculty member [4] indicated that “We sometimes provided students with a large font size and extra time on exams, but the provision of these adjustments was based on personal diligence”. Thus “for individuals with learning disabilities there were no clear services, and to be honest, a clear service has not existed, and what I saw was only ‘personal diligence’ [faculty members 6]. When comparing students with learning disabilities to students with other disabilities (e.g., students with hearing impairments), you could see that there was a clear plan, from the university administration and even from those working in this field, but for students with learning disabilities there was not. So sometimes students with learning disabilities could be provided with extra time on exams and coursework and that “what you can all do” [faculty members 6].

On the other hand, the second half of faculty members (4 out of 8 participants) described the availability of reasonable adjustments as not “available” or “non-existent”. One faculty member [3] stated with that “The only available support that I saw was providing access to buildings such as providing lifts for individuals with motor disabilities”. They explained that “I had a student with learning disabilities, but I did not receive any notification from the university that this student needed special treatment or reasonable adjustments”. Moreover, “I did not see any services for students with learning disabilities, such as extra time for exams or anything else. What I saw was facilitating the entry and exit of students with visual impairments into the college buildings” [faculty member 7]. So, “for students with learning disabilities, there were no clear services provided for them from the university administration or even consideration for those adjustments in plans and curriculums. The only services available were services for students with visual or hearing impairments and even those services were limited and needed requesting” [faculty member 8] such as ‘facilitating the entry and exit into the college buildings for students with visual impairments’ [faculty member 7].

Disability Centre/unit staff members

Disability centre/unit staff also discussed the availability of reasonable adjustments from their perspectives. They were asked to state the type of adjustments that were available at their universities. 5 out of 7 participants reported six different types of adjustments e.g., see table 4.34.

Table 4. 34: The availability of reasonable adjustments based on disability centre/units staff’s perspectives.

Adjustments	Centre/unit staff	University location	Number of responses
1. Different room for exams	staff 4, 5, 6, 7	Middle & West	4
2. Extra time on exams	staff 1, 4, 5, 6	Middle & West	4
3. A ‘reader’ (e.g., someone to read the exam questions for students)	staff 4, 5, 7	Middle & West	4
4. Alternative assignment formats (e.g., oral presentations instead of written assignments)	staff 4, 5	Middle	2
5. A ‘note taker’ (e.g., someone to take note of the lecture for students)	staff 1, 4	Middle	2
6. Extra time to complete coursework	staff 1, 5	Middle	2

As shown in Table 4.34, disability centre/unit staff members (5 out of 7) only mentioned 6 types of adjustments as available. They began by giving examples of the available adjustments and giving explanations as to why these specific adjustments were available. One of the disability centre/unit staff members [staff 1] who was the director of the centre (e.g., see Table 4.2.2) gave examples of “three different adjustments, namely, having a note taker, extra time on exams, and extra time on coursework which describes the most needed adjustments by students with learning disabilities”. However, interestingly, she [staff 1] mentioned that “The responsibility for provision of these adjustments remains on the students if they apply for the adjustments”. In addition, adjustments such as extra time on exams, a reader, a different room for exams, alternative exam formats and a note-taker were stated by other disability centre/unit staff [staff 4] as available. As explained, e.g., by staff 4, the need for those specific adjustments was due to “the characteristics of students with learning disabilities, such as problems with memory and attention as well as difficulties in note-taking”. And as emphasized, “Students with learning disabilities

were always asked to have a note-taker and if students only relied on themselves, they would not be able to continue in their studies” [staff 4]. However, some students with learning disabilities did not agree with the idea of a note-taker. For example, one disability centre staff member said: “I had a student with learning disabilities who did not agree with the idea of having someone as a note-taker, as she felt shy of having someone with her in class as a note-taker” [disability centre/unit staff member 4].

Furthermore, most examples of available adjustments were given by a staff member [5] who was an academic adviser for students with learning disabilities (e.g., see table 4.2.2) at the disability centre at their university. For example, these adjustments were extra time on exams/coursework, a reader, a different room for exams, and alternative assignments/exam formats. She said that “after students were registered at the centre, they were provided with the “Supporting Document”, in Arabic *alwathiqat aldaema*- الوثيقة الدائمة”. This type of document includes student name, year of study, major, and the adjustments they need” [staff 5]. Regarding available adjustments as stated by staff [5], “The exam time is doubled, meaning that if the exam is three hours, the student has four and a half hours. Also, extra time on coursework was provided for students with learning disabilities, especially when they were taking more classes”. Students with learning disabilities were provided with a different room for exams, with fewer students and distractions and “when a faculty member came to explain the exam questions to students with learning disabilities, this did not distract other students”. Moreover, interestingly, the choice of whether or not to have a different room for exams” was up to the student [staff 5]. The reason for this was explained as follows:

If she (i.e., the student with learning disabilities) wanted to maintain the confidentiality of her information, and she did not want to be tested in a different room, she could take her exam with other students. But most of the students who had learning disabilities said they wanted a different room for exams, especially when there were distractions to their attention [staff 5].

Furthermore, students with learning disabilities were provided with a “reader” and alternative assignment/exam formats. What was interesting about these adjustments was that providing someone to read the exam questions for students with learning disabilities was mostly done by a faculty member. Also, the decision of which assignment or exam format best suited a particular student with a learning disability was up to the faculty member. Interestingly, this was explained as follows:

We used to convert essay questions into multiple choice questions, but due to the university accreditation and quality requirements, now this adjustment is completely up to the faculty members. The adaptations of exam questions were given to faculty members, so that they could make the adaptations in a way that suited the student and did not conflict with the course outputs [staff 5].

Giving faculty members the power to decide which assignment or exam format to provide to their students with learning disabilities was stated by another disability centre/unit staff member [staff 4] who was working in another university location (e.g., see table 4.2.2). For example, she shared that before exams, they contacted faculty members to provide students with alternative exam formats (e.g., multiple choice questions instead of essay questions). Nevertheless, the availability of adjustments such as a “reader” and a “different room for exams” was also mentioned by a different disability centre/unit staff member [staff 7] from a different university location (e.g., a university in the west).

Students with learning disabilities

As students with learning disabilities were the focus of this study, it was essential to consider their viewpoints on the provision of reasonable adjustments at their universities (e.g., Saudi public universities). Interestingly, more adjustments were described by this group of participants (students with learning disabilities) than those described by faculty members and disability centre/unit staff (namely, 10 adjustments) (see Table 4.35). However, each student described the availability of reasonable adjustments from a different perspective.

Table 4. 35: The availability of reasonable adjustments based on students with learning disabilities' perspectives.

Adjustments	Students with learning disabilities	University location	Number of responses
1. A 'reader' (e.g., someone to read the exam's questions for students)	Student 1, 2, 4, 5	University A & B	4
2. Alternative exam formats (e.g., oral presentations instead of a written exam or multiple choice instead of essay tests)	Student 1, 2, 3	University A & B	3
3. Lecture notes before the beginning of the lecture	Student 4, 5	University A	2
4. Alternative assignment formats (e.g., oral presentations instead of written assignments)	Student 1, 4	University A	2
5. Different room for exams	Student 2, 4	University A & B	2
6. Extra time on exams	Student 2, 4	University A & B	2
7. Extra time to complete coursework	Student 3, 4	University A & B	2
8. Extra credit assignments	Student 4	University A	1
9. Large font size on presentations and exam questions	Student 3	University B	1
10. A 'note taker' (e.g., someone to take notes on the lecture for students)	student 1	University A	1

Student [1] gave examples of 4 adjustments that were available to her which were a reader, a note taker, and alternative assignments/exam formats. She began

with commenting that “My exams were mostly converted from essay questions into objective questions”. And “a reader was available to read the exam questions for me”. Also, different assignment formats were available to her as she explained as follows:

In the Family in Islam course, we were asked to do a search for a topic, but I didn’t know how to do a search, so I told her: “I want something alternative”. She said: “Suggest what you like as an alternative” and I said: “Summaries”, and she said: “All right” ... I made a summary and got full marks.

A “note-taker” was also available for this student due to her “slow ability in writing”, but as she mentioned, “Taking exams in a different room was not available to me and I was taking my exams with other students” [student 1]. In addition, student [2] stated that a “separate room for the exam” was available to her at the disability centre. She shared that: “My exams were in a different room at the disability centre with a reader”. She also explained that “my exams were not like before, when I got registered at the centre, the exams became multiple exam questions instead of objective questions”. However, a different assignment format was not available to this student, as she explained that “My assignments are still like other students, I still do not have a different assignment format which is still a problem”. Similarly, student [3] explained that she was provided with the following adjustments: “Large font size on the exam, alternative exam format, and extra time on coursework”. She explained that “My exams were “objective questions” not “essay questions” and written in “a large font size”. Regarding extra time on coursework, she expressed that she did not have “a determined deadline like other girls”.

Student [4] had experienced 6 types of adjustments, i.e., a reader, a separate room for the exam, extra time for the exam, extra time on coursework, an alternative assignment format as well as lecture notes before the beginning of the lecture. She explained that “I took my exams in a different room with other students with disabilities and was provided with a reader to read the questions for me which mostly was my teacher”. Regarding extra time on exams, she mentioned that “I am slow in reading and writing so they gave me more time, for example, two hours instead of one, or four hours instead of two”. Also, she explained that she was allowed to take extra time during coursework. For example, she shared that “Sometimes, the lecture is only one hour or half an hour, so the assignment has a time limit of half an hour. I cannot write the answer or do the homework in half an hour, so I was told to write it and send it to the teacher whenever”.

Moreover, adjustments such as alternative assignment formats and lecture notes before the lecture were available to this student [4]. By contrast, student [5] was receiving only 3 adjustments, which were lecture notes before the lecture, a reader, and extra time on the exam. But alternative exam formats were not available to this student, as she explained that “I have an application from the disability centre that listed all the adjustments that I need, but an alternative exam format was not one of them, and this is why this type of adjustment was not available to me”. And she stressed that “I wish I could be provided with alternative exam formats (e.g., oral presentations instead of a written exam or multiple choice instead of essay tests).

4.3.5.2.3 Additional types of adjustments

Some additional adjustments were described by participants (e.g., faculty members, disability centre/unit staff, and students with learning disabilities) that were not discussed in the literature review (See Chapter Two, Table 2.4).

Table 4. 36: Additional types of adjustments reported by participants from different groups.

New adjustments (not reported in the literature)	Groups			Number of responses
	Faculty members	Disability centres/units	Students with learning disabilities	
1. A writer (e.g., someone to write the exam answers as stated by the student) faculty [1]	√	√√		3
2. Re-explaining the lesson. “I was asked to re-explain the entire practical part to the student during office hours a day before the exam so that this helped her remember or understand more on the exam day.” [Faculty 5]	√		√	2
3. A peer as a note-taker “Now at the centre, we are trying to come up with a new development plan for note-taking. It's how a peer can be a note-taker” staff [1].		√		1
4. Subtasks format “Breaking down long tasks into subtasks is to be accomplished in stages. For example, dividing the mid-exam into two exams, e.g., whereas students do a four-part exam in one day; students with learning disabilities can do the exam over two days” staff [5].		√	√	2
5. Shadow Teacher “What we mean by shadow teacher is peer teaching” staff [5].		√		1
6. E-books “Providing students with an ebook so that students who have a reading disability can listen to the text instead of reading it” staff [6]		√		1

As presented in Table 4.36, re-explaining the lessons was one type of adjustment provided to students with learning disabilities. One of the faculty members [5] mentioned that “I had a student with a learning disability, and I was asked to re-explain the entire practical part to the student during my office hours one day before the exam to help her remember or understand more on the exam day. Also, a student with learning disabilities stated that I had a faculty member who was re-explaining the lessons to me via Zoom due to Covid 19.” Providing a writer (e.g., someone to write the exam’s answer as stated by the student) was mentioned three times by participants. For example, one disability centre/unit staff member explained the need for a writer by stating:

We had a student with learning disabilities who had a problem with writing: her handwriting was never clear. So, we sometimes asked a faculty member to be the writer, or the college provided her with someone else. The student explained the answer orally, and then the writer transmitted the answer to the exam paper [staff 5].

Also, breaking the task into subtasks was one of the adjustments provided to students with learning disabilities (e.g., breaking up one exam into two exams). One of the disability centre/unit staff members justified the need for this type of adjustment as a way “that can help students with learning disabilities in studying and for the exam. For example, if a student with a learning disability has an exam of four chapters, the student can do two chapters on the first day, and the other two chapters on the second day, not in one day like other students” [staff 5]. This type of adjustment was also mentioned by one of the students with learning disabilities who shared that “it is difficult for me in one day to sit down and study for four lectures, dividing the exam into two days is what suits me the best” [student 5].

A shadow teacher, or what was known as “peer teaching” was one of the adjustments that was provided by one of the disability centres/units (that is one of the disability centres at middle universities). The academic adviser of students with learning disabilities [staff 5] shared that “At first, we used to ask bachelor students who specialised in “learning disabilities” to provide peer teaching, then this idea was expanded, and now we have a list of students from each college who want to be a peer teacher”. She [staff 5] mentioned that “After starting peer teaching, we noticed that the academic performance of students with learning disabilities had improved, and their GPA had increased”. Another adjustment was providing e-books to students with reading disabilities. One of the disability centre/unit staff members [staff 6] explained “Students who have a reading disability can use e-books and listen to the text instead of reading it”. Also, student [1] mentioned that “One of the services that I received was help with my schedule and course hours. They help in adjusting my schedule and reduce my course hours when needed”.

4.3.5.2.4 Adjustments still needed.

A small number of participating students with learning disabilities (2 out of 5) discussed a few types of adjustments that they still did not have access to. For example, one of the interviewed students with learning disabilities [student 3] mentioned that “There is a need to have books in “PDF format,” not in hardcopies. Hardcopies are expensive and are heavy in my backpack, we should be allowed to use iPads instead”. She explained this as the following:

I saw a lot of difference and comfort from this aspect (e.g., using an iPad), such as enlargement and reduction you can control it from your mobile. It is easier and more comfortable than books, and I hope it will be facilitated in this

regard. Most doctors are fully committed to the book and there is no PDF version of the book to view in an iPad. I hope that there will be consideration of this adjustment in the future.

4.3.6 Theme Three: Interest in the provision of reasonable adjustments

Theme three was about discussing the interest of faculty members in the provision of reasonable adjustments to students with learning disabilities at Saudi public universities. Faculty members showed interest in the provision of reasonable adjustments, however, they gave different reasons to explain their interest in the provision of reasonable adjustments.

Two faculty members (faculty members 3 and 8) were strongly interested in providing reasonable adjustments to students with learning disabilities, however, they described their interest from different perspectives. One faculty member [3] stated that “I am not just interested, I am strongly interested in providing reasonable adjustments. And that is because those students with learning disabilities have the right to learning and education as well as the right to be provided with reasonable adjustments”. Similarly, another faculty member [8] said “I am very interested in providing reasonable adjustments to students with learning disabilities, and this is due to the individual differences among students”. He justified his interest in providing reasonable adjustments by saying that there was a need to help students with learning disabilities channel/harness their energies and reach their potential” as well as to deal with the “the individual differences among students with learning disabilities”. Furthermore, a few faculty members (e.g., faculty members 2, 4, 5 & 6) had similar strong interests in providing reasonable adjustments, but they gave different reasons to explain their interests. One faculty member [2] explained her

interest in the provision of reasonable adjustments saying that students with learning disabilities needed “something special, like reasonable adjustments” to “reach their goals”. Another faculty member [4] justified her interest in providing reasonable adjustments, noting that “Explicitly, this is their right. I don't know, I see that it is one of their rights, I have no other reason”. Moreover, seeing the provision of reasonable adjustment as the students’ right not to be discriminated against was stated by another faculty member [5]. This interest was explained as follows:

For me, yes, I am interested because I see that they have the right not to be discriminated against. When they have a need, as a university, we must conduct an assessment for all students, see their needs, and try to meet their needs. This is among the learning needs; yes, it is different from the needs of the rest of the students, but it remains a need for this student, and we must provide it [faculty member 5].

Moreover, reducing stress was also considered as a reason for being interested in the provision of reasonable adjustments as stated by one of the faculty members [6]. He linked his interest in providing reasonable adjustments to removing students’ stress due to their learning disabilities. He explained that:

The student is noticing that, for example, he does not know how to write, read, or his arithmetic is weak. When he is at a certain age at university, for example, 18 and above, and sees students around him doing well, this will cause psychological pressure. For me, this psychological pressure may force the student to leave the university.

4.3.7 Theme Four: Capacity and availability of resources of reasonable adjustments

Faculty members and disability centre/units staff were asked to describe their perspectives on the capacity and availability of resources in providing reasonable

adjustments at public Saudi universities. From their perspectives, five different challenges may have negatively influenced the capacity and availability of resources in providing reasonable adjustments at public Saudi universities, see Table 4.37. It is worth mentioning that this study considered “capacity” and “availability of resources” as the university’s availability of disability centre/unit staff members, human resources (e.g., specialists), information resources (e.g., courses and training) and financial resources.

Table 4. 37: Challenges related to capacities and availability of resources at public Saudi universities as described by participants from all groups.

Challenges related to capacities and availability of resources	Participant group		
	Faculty members	Disability centre/unit staff	Number of responses
1. Lack of human resources (e.g., lack of specialists in special education and learning disabilities)	√√√	√√√√√√√	10
2. Lack of informational resources (e.g., lack of courses and training)	√√√√	√√√√	8
3. Lack of financial resources (e.g., lack of financial support)	-	√√√√√	5
4. Lack of disability centre/unit staff (e.g., employees)	-	√√√√√	5
5. Lack of disability centres/units	√√√√	-	4

4.3.7.1 Human Resources e.g., specialists

The lack of human resources, e.g., specialists in special education and learning disabilities, was a concern for most of the faculty and disability centre/unit staff members (10 out of 15). From their perspectives, there was an absence of experts among decision-makers at their universities and among faculty members and disability centre/unit staff members. First, it was the lack of experts among the decision-makers around people who were responsible for the provision of reasonable adjustments at the universities. As emphasised by one of the faculty

members [7], “Unfortunately, the one who made the decisions (about reasonable adjustments) was not a specialist or familiar with the field of special education. And when discussing the required adjustments and support services, they saw them as costly, and unfortunately, they conflicted with people responsible for bringing resources and support services or adopting these adjustments”.

Secondly, there was a lack of experts among faculty members, for example, one faculty member [7] expressed that “The capacity is there, but we don’t have experts, people who can identify those students with learning disabilities and help the university in this regard. For example, it is difficult for a faculty member who is majoring in English or Arabic to come and say that this student has a learning disability, no one will believe that, and they will even be asked how you knew this student has a learning disability?” This perspective was also supported by another faculty member [5] who stressed “I do not know whether there were capacity and availability of resources (e.g., experts), but there were no resources provided to us to help us deal with students with learning disabilities”. And she emphasised that as faculty members [5] “we need expert people in teaching students with disabilities to help us as faculty members in providing these adjustments”.

Thirdly, disability centre/unit staff gave their thoughts on the lack of specialists at disability centres and units. One of the disability centre/unit staff members [3] stated that: “It’s assumed that staff who were employees at the disability centres should be specializing in special education, but our employees were not. I am the only one in the female department who specialised in special education and the rest were specialised in different majors such as office management”. This perspective

was also supported by another disability centre/unit staff member [4] who mentioned “We need people who specialised in learning disabilities, yes there were some but that was not enough. And she explained that “Yes, my colleague and I are masters students in special education, but we need more experts, specifically, in reasonable adjustments”. Moreover, the need for more experts was described by other disability centre/unit staff. For example, one of the staff members [5] stated that “People who dealt directly with students with disabilities were all specialists in special education, but due to the development of the centre and the increased number of students with disabilities we need more specialists. Now the number of female specialists is considered to be small compared to the number of female students”. Also, another disability centre/unit staff member [1] supported the above perspective by stating that “The number of specialists may be very few in light of the centre’s many services. But the development plan is continuing, and we are now seeking the assistance of specialists from the university, not only in learning disabilities but in all specialisations of disability in general”.

4.3.7.2 Informational Resources

Another challenge half of participants (8 out of 15) talked about was the lack of informational resources such as courses and training regarding the provision of reasonable adjustments. From their points of view, the availability of such resources, e.g., information about students with learning disabilities or reasonable adjustments was still unavailable to some extent. For example, one faculty member [5] referred to the lack of information about students with learning disabilities and reasonable adjustments as “lack of orientation”. She explained “We don't have an "orientation" at all; no one has oriented me”. Also, one disability centre/unit staff member [staff 3]

described the absence of information by commenting “There was a female employee at the centre who said this: ‘I do not know autism, motor disabilities, or that there is such a thing as learning disabilities in special education; I was thinking that there were only people with hearing impairments’”. Moreover, the absence of resources such as courses and training presented itself as an issue, for example, it was interesting that four faculty members described the availability of courses and training as follows:

There were no courses and training available to us, all we received were letters [faculty member 1].

No, on the contrary, I hoped to get training, but there was no training or notification at all [faculty member 3].

Honestly, there were no courses or training available [faculty member 4].

Only lectures to increase awareness were available, but training was not available [faculty member 6].

Disability centre/unit staff also discussed the lack of resources regarding courses and training, commenting “I wish and badly wish that if training or courses had existed, it would have given us a light on the path we were walking. We are literally walking into the unknown, and this word is the most accurate description” [staff 3]. This perspective was also supported by one disability centre director [staff 2]: “We need specialised courses, and we hope that they exist”. Also, another disability centre/unit staff member added that “we need more courses, especially in reasonable adjustments, adapting the curriculum, and working with students with learning disabilities” [staff 4], but “we do not have any courses in the centre for the employees themselves that they can develop their tasks, their responsibilities, or even their awareness of people with disabilities” [staff 3]. The reason for the absence

in courses was explained as follows: “This lack of courses is due firstly to unwillingness in providing or looking for courses by the centres for their employees, and secondly to the university not accepting all courses, only courses from specific institutions, and some of these institutions not having courses about individuals with disabilities” [staff 4]. This finding specified that there may be a limitation in the capacity of centres/units at public Saudi universities to provide courses and training available for disability centre and units staff. By contrast, one of the disability centre’s staff [5] mentioned that “We focus our courses on people who need them the most (i.e., faculty members). She explained that “As specialists, we may need courses, but we do not face a problem when working with students, in the end we are specialists and know what type of services students need. Those who may face a problem working with students are those outside of the centre such as faculty members, thus why our focus is to provide courses for faculty members”.

4.3.7.3 Financial Resources

Most of the disability centre/unit staff (e.g., 5 out of 7) talked about “insufficient financial resources” (e.g., not having an independent budget for the disability centres or units). Participants (5 out of 7) indicated that there was financial support but not enough to support them in providing all services needed for students with disabilities. For example, one disability centre/unit staff member explained that:

Of course, we always want more, I mean, at the beginning of each year, we need financial support, so we can help students. Especially, students' problems were not routine; every time a new problem comes... We need a budget; is this budget available to the centre? No, we must make a request. The possible obstruction for us is related to finance. I mean, we have a

problem here, so we need a budget to be able to provide the required 'assistance' for students.

This perspective was also supported by another staff member [7] who stated that “We used to be a disability unit but now we are the disability centre. Our goal is to be an institute so we can be independent and have our own budget”. This indicated that there was a need for the disability centres and units to have their own budget to be able to provide the required services to students with disabilities. This can be supported by the following statements “As I told you; there was no support, even if we needed something or wanted something; we waited we had to wait for the annual budget to be allocated” [staff 3].

4.3.7.4 Disability Centres/Units, and Staff Members

The lack of disability centres and units was discussed by half of the faculty members (e.g., 4 out of 8). From their perspectives, the absence of disability centres or units in their universities negatively influenced overall capacity. One faculty member [8] reported that “In my university there were no data, disability centres or disability units for students with learning disabilities”. And he stressed that “to the best of my knowledge a proposal was submitted to the university to establish a special centre for people with special needs, but it was not considered. So, it has been more than two years since the proposal was submitted and the centre has not been established yet”. And the reason for the absence in establishing the centre was as follows: “They do not know the importance of this topic, they do not understand the necessity of this topic, and they do not think that it should be a priority. If the issue of people with special needs and the idea of the centre was a priority for the university, I think that they would not hesitate to start implementing it”. Another

faculty member [2] supported this perspective by saying “Students with learning disabilities need someone to represent them and to convey to them what is required from them by faculty members so it’s important to have a disability centre/unit. However, to the best of my knowledge, there was no disability centre or unit in my university”. Furthermore, another faculty member [5] stressed that there was no disability centre or unit in their university. And they emphasised that if there was a disability centre or unit, “it will help us solve most of the problems related to students with learning disabilities”. This perspective was supported by another faculty member [7] who shared that “It’s important to have a disability centre or unit, so we can refer to students who seem to have a learning disability. I think in this way we can identify students who have a learning disability and help them integrate, which will enable them to graduate with a higher GPA. However, there was no disability centre/unit in my university”.

Another issue mentioned by most disability centre/unit staff (5 out of 7) was the lack of disability centre/unit staff members. As described by one of the disability centre/unit staff members [3], “The number of staff is not acceptable and not suitable. And due to the shortage of staff at the centre, we were asked to work in different jobs that were supposed to be occupied by other employees”. Also, the low number of staff was considered by other disability centre/unit staff [2] who shared that “The number of staff is very low, we only have 5 staff, so we need more staff”. Additionally, the need for more staff was emphasised by some of the disability centre/unit staff members. For example, one disability centre/unit staff member [1] commented that the number of staff was not enough, and there is a need to expand the number of staff further”. Another staff member [5] added that “as the centre continues to

develop, there is a need for more staff". This similar perspective was also stated by another staff member [7] who stressed that "Now the number of staff is 10 and we are working to increase this number in the near future".

4.3.8 Theme Five: Reasonable adjustments policy at public Saudi universities

Theme five presents participants' viewpoints on the policy of reasonable adjustments at Saudi public universities. Participants were asked to express their perspectives as to what extent the policy of reasonable adjustments was available at their respective universities. Then participants were asked whether a policy of reasonable adjustments was needed and how important it was to have a such a policy. Lastly, participants gave examples of how a policy on reasonable adjustments could or should be at their respective Saudi public universities.

4.3.8.1 The need for and importance of a policy for reasonable adjustments

Faculty members were asked about why a policy of reasonable adjustments might be needed (6 out of 8 participants) and the importance (4 out of 8 participants) of such a policy. From their perspective, a policy of reasonable adjustments was needed to direct them in working with students with learning disabilities. This could be indicated in the following statements: "Yes, I think the policy must be available so that faculty members can know how to deal with a student with disabilities" [faculty member 7]. Moreover, "I believed that there is a need for a such policy, if there is no policy, how can faculty members provide reasonable adjustments?" [faculty member 4]. "The policy is an essential part of regulating workflow; because faculty members will return to this policy and take it as a path for their way of teaching" [faculty member 2]. And "The policy is necessary as it helps us know how to deal with students with

learning disabilities and provide them with a better experience. I wished a policy was available when I had a student with a learning disability that would have improved the outcomes of that student” [faculty member 5]. Furthermore, “If there was no policy, students with learning disabilities may be ignored” [faculty member 7], so having a policy help in clarifying everything to everyone” [faculty member 7].

Additionally, the importance of policy was considered by faculty members who said: “Having a policy is necessary and an important step for the university to take to empower these students, to take advantage of their potential” [faculty member 8], and “let everyone be familiar with the services and adjustments” [faculty member 7]. So that in this way the help and support “provided to students with learning disabilities will be based on a policy not based on personal diligence” [faculty member 2]. Moreover, when a policy exists “an administrator or a specialist in the field of special education, can ask for a certain thing, or support a particular student based on that policy” [faculty member 7]. So that it is important to have such a policy to “govern the course of work” [faculty member 2] and “help in explaining to students their rights and duties” [faculty member 6]. Without a clear policy for reasonable adjustments, the help and support provided to students with learning disabilities could be seen as “a personal diligence and it may be praiseworthy or blameworthy” [faculty member 2].

4.3.8.2 The availability of a policy reading the provision of reasonable adjustments.

Participants were divided about their perspectives regarding the existence of a reasonable adjustments policy at Saudi public universities. On the one hand,

several participants (9 out of 15) commented that the policy of reasonable adjustments existed in their universities, however, to some extent, issues such as a lack of awareness, lack of application, and limited knowledge may have impacted the effectiveness of this policy. On the other hand, some participants (7 out of 15) stated that the policy of reasonable adjustments did not exist at their universities.

However, some faculty members, disability centres/units, and students with learning disabilities (9 out of 20) considered that a policy of reasonable adjustments was available in their universities. For example, some of the participants gave their thoughts about the existence of a reasonable adjustments policy as follows:

Yes, a policy exists [staff 1]

I am sure that policy has existed in my university [faculty member 1].

From my perspective, the policy has existed [faculty member 3].

Yes, there is a policy, and the university has published the regulations and rules of this policy [staff 4].

I am sure there is a policy [student 5]

Yes, the policy is available on the deanship's webpage and highlights the services and supports [staff 6]

Yes, the policy exists, and now we are in the process of preparing the centre's policy guide which includes all services provided by the centre [staff 7].

However, as emphasised by participants, issues such as lack of awareness and application may have negatively affected the availability of this policy. For instance, one faculty member [1] expressed that "I am sure this policy existed in my university, but I don't know about this policy". This perspective about the lack of awareness of the policy was considered by another faculty member [3] who stated

that “From my perspective, the policy existed, but I think that the university or the disability centre did not make faculty members aware of it”.

Faculty member 3 went on to say, "I think the centre itself did not employ the policy very well; if it were engaged correctly, it would have extended, spread, and provided awareness among members of the university, students, and parents." Also, a student with a learning disability [3] supported this perspective by saying “Certainly, there was a policy, no place without rules and regulations, but I did not have the opportunity to learn about this”. And another student with a learning disability [5] added that “I am sure there was a policy, but I did not get it”. The lack of application was stressed by one of the disability centre/unit staff members [4] who stressed that “The application of policy needs to be compulsory, not optional”.

Several participants (7 out of 15) considered that the policy of reasonable adjustments did not exist at their universities at all. One disability centre/unit staff member said that “The disability centre opened just two years ago and so far, there are no regulations”. Also, one of the faculty members [8] supported this, saying “I think that there was no clear policy adopted by the university administration to consider or meet the needs of this category (e.g., students with learning disabilities) in general. For example, if assumed that there was a clear policy, it should be written in the course syllabus”.

Moreover, another faculty member [2] emphasised the absence of policy on students with learning disabilities by stressing that “In general, I don’t think there was a policy, and specifically, a policy for this category (e.g., students with learning disabilities) does not exist on any level”. Faculty member 4 stated “In my university

there is still no clear policy for reasonable adjustments or even for providing services for students with learning disabilities.” This was evident by the absence of a clear written policy for students with learning disabilities. “I don’t know if there was a written policy regarding reasonable adjustments, but I think what was provided was based on a personal diligence, not based on university policy” [faculty member 5]. This perspective was supported by another faculty member [6] who stated that within the institutional level (e.g., universities) “the policy of reasonable adjustments is absent, and the reason for this is because of the conflict in points of view among policymakers at university level. Therefore, as he [faculty 6] recommended that there must be a policy published by the Saudi minister of education to be the reference for all Saudi universities regarding disability.

4.3.8.3 How policy of reasonable adjustments should be?

Participants (faculty members, disability centre/unit staff, and students with learning disabilities) gave examples of how the policy of reasonable adjustments at their respective Saudi public universities could or should be e.g., see Table 4.38.

Table 4. 38: Participants’ perspectives on how the policy of reasonable adjustments at their respective universities should be.

Desired characteristics of policy on reasonable adjustments	Participant group			
	Faculty members	Disability centre/unit staff	Students with learning disabilities	Number of responses
1. Clear	√√√√√	√	√	9
2. Specialised	√√√	-	-	4
3. Inclusive	√√√	√	-	3
4. Flexible	√	√	-	2
5. Reasonable	√	-	-	1
6. Confidential	-	-	√	1

4.3.8.3.1 Clarity and Specialisation

As you can see in Table 4.38, participants stressed the need for a “clear” and “specialised” policy regarding the provision of reasonable adjustments. From their standpoints, the policy needed to “clearly” state the role of faculty members, the availability of services (e.g., reasonable adjustments) and the types of services that should be provided to students with learning disabilities. Regarding the role of faculty members, two participants expressed that the policy needed to “clarify how to deal with students with learning disabilities” [faculty member 3] and “what the needs of students with learning disabilities are” [faculty member 4] in terms of reasonable adjustments. Moreover, so that faculty members could clearly understand their roles and responsibilities, it was emphasised that the policy needed to “clearly state the availability of services” (e.g., what services were available) [staff 3 and student 4], as well as clearly state “what types of services should be provided to students with learning disabilities” [faculty member 6].

Furthermore, the specialist nature of the policy was seen by participants (4 out of 8 faculty members) as another critical aspect of the reasonable adjustments policy. One faculty member [5] indicated that “The policy should not only be developed based on one point of view such as the university’s”, instead that “there is a need for a council composed of a group of experts in different disciplines to discuss this topic” [faculty member 8]. Thus “There is a need for a policy by experts and qualified people” [faculty member 7], “not by “personal diligence” [faculty member 5]. A source of experts and qualified people was considered by two of the faculty members (e.g., faculty 6 and 8) at the Departments of Special Education of Saudi public universities. For example, one faculty member [8] expressed that “I

think it is fair that the Departments of Special Education, in particular, have a main defender or lawyer, or their first advocate and advocate for their empowerment, needs and rights (e.g., students with learning disabilities) on campus in general". Another faculty member [6] supported this perspective by stating "We need to give authority to the Departments of Special Education in universities so that the policy is present, amended, implemented, and approved by them, with the knowledge of the university administration". The reason for considering the Departments of Special Education as the source of experts for the policy of reasonable adjustment was justified as follows: To reach a solution (e.g., related to the policy), the Department of Special Education and the supervisors specialising in the field of special education need to be given full authority" [faculty member 6].

4.3.8.3.2 Inclusivity and Flexibility

"Inclusivity" and "flexibility" were other qualities that could be considered during the development of a policy related to the provision of reasonable adjustments (according to 6 out of 15 participants). "Inclusivity" was described by participants as "A policy that does not limit to the academic aspect, but includes the social aspect, the cultural aspect, and the student's experience on the campus as a whole" (faculty member 8). And another participant (e.g., disability centre/unit staff member 3) expressed that "The policy should include all types of disabilities, not only students with learning disabilities". Also, a participant (faculty member 3) referred to inclusivity in the policy, commenting that "The policy needs to be inclusive and include different aspects such as plans, goals, the needs of students, and how to deal with students". Moreover, one faculty member [1] stated that "The policy needs to include not only the theoretical side but also the practical aspect, such as laboratory training and

hospital training". Additionally, the policy should be flexible in the sense that it could be "updated every once in a while" [faculty member 6] and "adjusted based on the different 'circumstances'" [disability centre/unit's staff 3]. For example, one faculty member [6] stated that "I think the policy should be flexible and modified based on the development and the suggestions". This was supported by one disability centre/unit staff member [staff 3] who stressed that "The policy needs to be very flexible depending on the circumstance, it is impossible to unite everyone in one circumstance".

4.3.8.3.3 Reasonable and Confidential

When discussing what a policy of reasonable adjustments could involve, the terms "reasonable" and "confidential" were referred to by a faculty member and a student with a learning disability. For example, the faculty member [5] considered that a reasonable policy was a policy consistent with the university's resources (e.g., human, information, and financial resources) in the sense that it was unreasonable to develop a policy that doesn't consider the availability of the university resources. For example, she [faculty 5] mentioned that "It is not reasonable to ask a faculty member to give more time for students with learning disabilities when they don't have more time in their schedule". Another example was that "It is not reasonable for me to sit next to students and read the exam question for them as I have other things that I need to do" [faculty 5]. Furthermore, the need for "confidentiality" was considered by one student with a learning disability [4] who stated "I don't know if there was an article in the policy about students' confidentiality, but I hope that it does exist. I hope that there was an article in the policy requiring faculty members not to disclose that the student was registered at the disability centre". She added,

“I hope that students can be directed to the disability centre without anyone knowing”
[student 4].

4.3.9 Theme Six: Facilitators and barriers toward the provision of reasonable adjustments

Participants identified different types of facilitators and barriers regarding the provision of reasonable adjustments, as presented below.

4.3.9.1 Facilitators to the provision of reasonable adjustments

In relation to facilitators, participants considered that recognising learning disability as a disability category, disclosure of the disability, increasing effective communication and awareness, and creating disability centres/units could facilitate the provision of reasonable adjustments as presented in Table 4.39.

Table 4. 39: Participants’ perspectives on the facilitators to the provision of reasonable adjustments

Facilitators of the provision of reasonable adjustments	Participant group			Number of responses
	Faculty members	Disability centre/unit staff	Students with learning disabilities	
1. Disclosure of disability	√√√√√	√√√	-	10
2. Having a disability centre/unit	√√√√√√√		√	9
3. Increasing awareness	√√	√√√	√√	10
4. Effective communication and collaboration		√√√	√√	7
5. The Recognition of Learning Disability	√	√√	-	5

4.3.9.1.1 Disclosure of the disability

From the participants’ viewpoints, on the one hand, due to the invisible nature of learning disabilities, the disclosure of the disability was needed to facilitate the provision of reasonable adjustments. On the other hand, there were many issues (as

summarised in the next table) that prevented students from disclosing their disabilities.

Table 4. 40: Issues related to the disclosure of the disability from participants' perspectives.

Issues related to the disclosure of the disability	Mentioned by participant group			
	Faculty members	Disability centre/unit staff	Students with learning disabilities	Number of responses
1. Issues related to students, e.g., the stigma of disability and losing their place at the university	√√√√	√√√	√	10
2. Issues related to the university, e.g., policy and admission.	√√√	√	-	5
3. Issues related to parents, e.g., refusing the stigma of disability.	√√	-	-	3
4. Issues related to society, e.g., negative attitudes	√	-	-	2

On the one hand, from faculty and disability centre/unit staff members' perspectives (e.g., 6 out of 15), the disclosure of the disability was needed to facilitate the provision of reasonable adjustments. Starting with faculty members, one faculty member [3] started that:

Unfortunately, it is rare for the student to disclose his problems to the teacher or the professor. From my side, I always addressed this at the beginning of each semester at the introductory lecture. I said to the students, if you have educational problems, please come to my office, and tell me personally in a very confidential manner. But unfortunately, there was no cooperation from the students. We sometimes noticed that a student had a problem, but it was impossible to disclose. There are shortcomings in this matter.

This was explained by another faculty member [2] who stated that "Students with learning disabilities need to disclose their disabilities so that faculty members are familiar with whom to deal with. It may not be my responsibility as a faculty member to search for those who have learning difficulties or not unless they disclose

it". Moreover, one faculty member [3] expressed that "From my point of view, there are no reasons preventing the provision of reasonable adjustments to students with learning disabilities, but first we need to know who has a learning disability so that we can provide these adjustments". This point of view was also considered by another faculty member [5] who indicated that:

I see it as for faculty members to know who has a learning disability. It is not a physical condition that we know about, but it is the student's privacy/confidentiality. However, still, as faculty members, we must know so that we can offer the required help, see how to improve the performance of this student, and how we can make these adjustments.

Furthermore, disability centre/unit staff (3 out of 7) emphasised the need for students with learning disabilities to disclose their disability to receive the needed adjustments. For instance, one disability centre/unit staff member [1] stressed that "Reasonable adjustments are available, however, for students to obtain the adjustments, it depends on the student applying to the centre by disclosing the disability". This perspective was also supported by other disability centre/unit staff (staff 2 and staff 7) who considered that in order for students with learning disabilities to receive reasonable adjustments, they needed to disclose their disabilities to the centre/unit. For example, one disability centre/unit staff member [2] explained that "We don't have a specific mechanism by which I can know this student has a learning disability unless the student applies to the centre by disclosing the disability".

On the other hand, participants considered that some reasons prevented students with learning disabilities from disclosing the disability, such as issues related to universities, parents, society, or the students with learning disabilities

themselves. First, as described by faculty members and disability centres/unit staff members (14 out of 15), sometimes students didn't disclose their disability due to issues related to the stigma of disability or being afraid of losing their place at the university. For example, according to one disability centre/unit staff member [1], "The stigma of disability is a global issue and one of the main reasons that prevents students from disclosing their disability". She explained this as follows:

Some students with learning disabilities know that they have a learning disability and know that they can be provided with reasonable adjustments, but don't ask for it. They don't want faculty members to know that they have a learning disability, so they look for resources outside of the university to keep their identity confidential at university. They say: I bear this problem or use external support services, but I do want not to have a record stating that I have a learning disability.

This interesting finding was supported by another disability centre/unit staff member [7] who stated that "There were some students who had a learning disability, but they did not want to admit that they had a learning disability" to avoid the stigma of disability. She [staff 7] explained that "When some students with learning disabilities started to struggle and were directed to the centre, they refused to admit that they had learning disabilities and explained that "We don't want to be classified as having learning disabilities". Moreover, being afraid of losing a place at the university led some students with learning disabilities to avoid disclosing their disabilities. As stressed by one of the faculty members, [2] students with learning disabilities "want an equal opportunity and more than equal" when applying for university. She explained that "I don't think that a student with learning disabilities will disclose the disability due to the fear of losing their place or the chance of being

accepted". This perspective was considered by another faculty member, [3] who expressed that "still, students with learning disabilities are afraid of being rejected by the university" due to the disability. This finding was also supported by a disability centre/unit director [staff 1] who stated that:

There are no students who apply and say that I have a learning disability or a hidden disability. Students may fear that the progress or disclosure of the disability affects their enrolment in certain specialised programs that s/he aspires to, or affects their reputation in their academic career, even though all the information is confidential.

This perspective was supported by a student with learning disabilities [1] who emphasized that "I was rejected for being accepted into the program that I wanted even though I met all the requirements of that program". She explained this as follows:

In some specialisations, we cannot enter them because the reason, sorry for this word, is "trivial". In some specialties, we are deprived of them, but we can enter them. I mean, if there is something we cannot do, we will say so, but from my point of view, I feel capable of this thing. I wanted "psychology", but I was overwhelmed because I was not accepted, even though my GPA would let me in. Because from the Student Affairs, it was written that this girl has a disability so this course/department may not be suits for her. Who said? Ok, try me, I can do it or not, do not judge the first thing you see this person, do not judge.

Members of staff said that "Universities should clearly state that the disclosure of disability will not affect the chance of being accepted into university. This means that the students should know that if they disclose their disability, it will not affect their chance of being accepted into university. Universities can achieve this by

providing awareness of the disclosure of this disability so that students can disclose their disability without being afraid.” [faculty member 2]

Secondly, participants (5 out of 15) emphasised that sometimes students with learning difficulties did not disclose their disabilities due to reasons related to universities, such as the lack of a clear university policy regarding the disclosure of the disability. From their perspective, “The issue started from the beginning, meaning that during registration and acceptance stage, learning disabilities were not listed within the disability categories in the application form” [faculty member 4 and staff member 6]. One disability centre/unit staff member [6] explained that “Learning disabilities were not included, what were included were disabilities like motor disabilities or hearing and visual impairments This resulted in some students not registering as having a disability”. Thus, in some Saudi universities, learning disabilities are still not disclosed/registered during the registering process. This finding was also supported by a faculty member [4] who said that “If the university did not list learning disabilities within the list of disability categories, how will students with learning disabilities disclose their disability?”.

Thirdly, participants (5 out of 8 faculty members) considered that some students with learning disabilities avoided disclosing their disabilities due to reasons related to their family (e.g., parents) or society. As emphasised by participants, parents played a major role in the disclosure of the disability. For example, one faculty member [1] stressed that “Some students were asked by their parents not to disclose their disability” at the university. She explained “Some parents were willing to disclose to the university, but some didn’t want to as they thought that the

disclosure of the disability may lead students to feel embarrassed in the eyes of the faculty members and their peers". Another faculty member [2] supported this perspective by expressing that "Sometimes, the mother asks the girl not to disclose that she has a disability". This may be because "Some parents didn't disclose the disability to the university as they considered that the student didn't have a disability, even though it was clear that the student had a disability" [faculty member 3]. Society also had a major role in the disclosure of the disability. One faculty member [1] described that "The view of society prevails". He [faculty 1] explained that "The most important thing for us is this: the view of society is: do not talk, do not go to the centre, do not resolve it, your problem is not big. So, students with learning disabilities were afraid of society's view". Society's viewpoint about learning disabilities was also expressed by another faculty member [2] who stated that "There is a need to increase awareness so that students can disclose their disabilities".

4.3.9.1.2 Recognizing learning disabilities as a disability category.

Participants emphasised that to facilitate the provision of reasonable adjustments, it was necessary to recognise learning disabilities as a disability category by Saudi public universities. In other words, "for students with learning disabilities to receive the required adjustments, they need to have a clear identification" [faculty member 4]. One faculty member [6] stated that "The main issue is the lack of identification, this is our problem. It is possible to bias certain groups, and not look or think about some specific categories that you thought were considered simple; however, these simple things can be significant with time, unfortunately". He [faculty 6] explained that "The disability centre in my university provides services for all students with disabilities, but I have not seen any student

who was classified as having a learning disability. So far there is nothing clear for those students with learning disabilities and what was known to us were disabilities such as motor and intellectual disabilities or autism”.

This finding was supported by another faculty member [4] who stated that “Based in my experience, unfortunately, the disability program at my university did not include students with learning disabilities. The program included disabilities such as motor disabilities or visual and hearing impairments, not learning disabilities, so these students did not receive services such as counselling or psychological services. In addition, she [faculty 4] mentioned the following:

Our disability centre does not identify students with learning disabilities and thus during registration, students cannot indicate that they have a learning disability. As you know in other countries, learning disabilities are included (e.g., recognised) within disability categories during admission, but this is not the case in Saudi Arabia. So, these students still have no classification and are treated like other students (e.g., without disabilities). And unfortunately, they may be exposed to uncomfortable situations and subjected to injustice.

Disability centre/unit staff members also gave some perspectives about the need for clear identification for students with learning disabilities. For instance, one disability centre/unit staff member [2] reported that “Students with learning disabilities are identified only in schools, not universities, and thus these students have no specific programmes at the university”. This was supported by a disability centre director [staff 1] who explained that “Most disabilities registered at the centre were visual, hearing, physical, kinesthetic and chronic diseases, but we are in a stage of development in adding developmental disabilities (e.g., including learning disabilities). Furthermore, another disability centre director [staff 7] mentioned that

“So far learning disabilities are still not included with the disabilities categories, and I don’t know why ... and after a big struggle, we accepted the first two students with learning disabilities 6 years ago and this was a big achievement for the centre”.

4.3.9.1.3 Increased awareness

Another factor that could help in facilitating the provision of reasonable adjustments to students with learning disabilities would be to increase awareness of learning disabilities, reasonable adjustments, and the existence of disability centres/units as well as students’ rights in receiving reasonable adjustments (10 out of 20 participants). Firstly, there is a need to increase awareness of learning disabilities and reasonable adjustments. One disability centre/unit staff member [staff 5] said that “In general, faculty members need more awareness and need to know how to deal with students with learning disabilities”. This was indicated by one faculty member [3] who stressed that “Our society includes faculty members still unaware of learning disabilities or even the belief that those students exist in higher education”. This interesting finding was supported by a student with learning disabilities [2] as follows:

In my university, I never see any awareness of this subject; that students with learning disabilities can study, learn, or challenge themselves so that they complete their education. Rarely have I seen a student with learning disabilities complete their studies ... Honestly, there is not much awareness about it in general, especially in middle school, secondary school, and university. There is not a lot of awareness at any stage.

To provide more awareness of learning disabilities, participants considered that lectures about learning disabilities were needed. For example, one faculty member [4] emphasised that we need “lectures about this category of students in

higher education; we need to know what their characteristics are and the challenges that they face in universities". She explained that "Such information is needed to distinguish between undisciplined students and those who have learning disabilities". Moreover, the need for "lectures" was also emphasised by one of the students with learning disabilities [2] who stated that "We need lectures to make people aware that individuals with learning disabilities are able to study and live their lives like others". And she emphasised that "There is a need to explain to faculty members what learning disabilities are and what problems and challenges we face".

Additionally, the need for increasing awareness of reasonable adjustments was considered by a small number of disability centre/units staff (3 out of 7). For instance, one disability centre/unit staff member [1] stated that "One of the things that can facilitate the provision of reasonable adjustments is knowledge and awareness of reasonable adjustments". This perspective was supported by another disability centre/unit staff member [6] who indicated that "We need to be aware and train faculty members on providing reasonable adjustments". And she [staff 6] explained, "In my opinion, faculty members need to have a certificate, for example, in educational practises or adaptation for students with disabilities". Moreover, a disability centre/unit staff member [5] expressed that "Faculty members need to have more awareness and need to know how to deal with students with learning disabilities. They need courses in educational practises and dealing with students with learning disabilities". Moreover, another disability centre/unit staff member [staff 5] added that "Faculty members need courses in teaching methods and in ways of dealing with students with learning disabilities".

Furthermore, participants (7 out of 20) emphasised that there was a need to increase awareness of the existence of disability centres/units, and the rights of students with learning disabilities in receiving reasonable adjustments. Starting with the rights of students, one faculty member [5] stressed that “Students with learning disabilities don’t know their rights”. She explained that:

The student to whom I refused to provide the adjustment if she knows the policy or the rights could have said: no, I have a disability, and it is my right to present alone (e.g., alternative assignment formats). I see that even the students were not aware of their rights. There was nothing that explained to the students about their rights or how they can claim them.

This finding was supported by a student with learning disabilities [2] who stated that “I had no knowledge that students who had learning disabilities could receive special adjustments, for example, adjustments related to exams, assignments, lectures etc. She explained that “I did not know about the availability of these services until my fifth term at the university”. The lack of awareness of rights in receiving reasonable adjustments was considered by another student with learning disabilities [1] who expressed that “I did not know about the services until I went to the centre”. Moreover, another student with learning disabilities [3] added that “When I first entered the university, honestly, I was confused. I didn’t know my rights or the things that I had to do. I wished someone would understand”.

Also, the need to increase awareness of the existence of the disability centres/units was considered by participants. For example, a student with a learning disability [4] reported that “The disability centre in my university was hidden, I did not know about the centre until I started having real problems.” And she explained that:

I need the centre to be known to all girls who need these services (e.g., reasonable adjustments). I mean as they said: the centre is hidden, not all students know that if they need services can go to the disability centre. I did not know about the centre until I started having real problems ... It took me a year to get registered at the centre. I know a lot of girls who said: we have similar issues like you, but we don't know about this place.

This perspective was supported by one faculty member [3] who stated that “I do not know about the existence of the disability centre, and I don't think other faculty members know either”. She explained this as follows:

The reason is that the university did not provide awareness about the disability unit. The university needs to introduce the unit and publish this on the university's social media accounts. There is a need to share that we have a disability unit, and everyone is welcome so that students themselves can feel that they are welcome at the university.

4.3.9.1.4 Having a disability centre or unit.

Participants mentioned that having a disability centre or unit was an important aspect of facilitating the provision of reasonable adjustments. From their perspectives, the availability of disability centres/units could provide different ways of support which could positively influence the provision of reasonable adjustments. Participants (4 out of 8 faculty members) considered that the disability centre/unit was the responsible party for providing services and contacting faculty members and students with learning disabilities. Moreover, they saw the disability centres/units as “the responsible department for dealing with the problems of students with learning disabilities” [faculty member 5]. So that having a disability centre or unit as “the main reference for the faculty members and students with learning disabilities” [faculty members 2 and 5] would help in clarifying the duties and rights of the faculty

members and students with learning disabilities which could, in turn, facilitate the provision of reasonable adjustments.

Two faculty members [3 and 4] also stressed that there was a need for faculty members to know their rights and duties toward students with learning disabilities and this could be achieved through disability centres/units. For example, one faculty member [3] expressed that “I think it is useful to have a disability centre/unit, so faculty members know how to deal with this student, what the rights are of this student, or what the duties are of the member towards this student, [...] it helps a lot”. This perspective was supported by another faculty member [4] as follows:

I think the disability centre/unit has an important role in providing services such as student counselling, academic counselling, and psychological counselling as well as reasonable adjustments and thus it is important to be available. Because it will help students with learning disabilities communicate with the academic advisors in their departments to circulate to all those who are faculty members, studying them, for example, as you mentioned in the reasonable adjustments. So, every student will have a guidance file from the day of entry into the university which explains that this student with learning disabilities needs additional time, a large font size, etc.

Furthermore, students with learning disabilities need a specialised department to consider their needs and support them with their difficulties [faculty member 2] which could be the disability centre or unit at their university. As explained by one faculty member: [3] “It is useful to have a disability centre or unit so that students with learning disabilities know their rights and duties, especially regarding reasonable adjustments, without such a unit how do students with learning disabilities know their rights and duties?”. Moreover, participants stressed that

“Having a disability centre/unit will help students to be successful and improve their performance” [faculty member 5] as well as “helping in providing reasonable adjustments to students with learning disabilities” [faculty member 4].

4.3.9.1.5 Effective communication and collaboration

Effective communication and positive collaboration were considered by participants as facilitators toward the provision of reasonable adjustments. Regarding effective communication, two students with learning disabilities considered that effective communication by faculty members facilitated the provision of reasonable adjustments for them. For example, one student [4] explained that the disability centre wasn't known to her until she was directed to the disability centre by one of the faculty members. She explained as follows: “The first term had passed, my grades were terrible, and I failed in two subjects... until a faculty member came to me and said: Go to a place named the disability centre and tell them what you have”. This finding was also supported by another student [2] who stated that she was referred to the disability centre by one of the faculty members. She expressed that “The faculty members noticed that sometimes I did not understand what they were trying to explain, so they told the centre about this”.

Additionally, some students with learning disabilities and disability centre/unit staff considered that positive collaboration by faculty members facilitated the provision of reasonable adjustments. For instance, one disability centre/unit' staff member [7] reported that “Some faculty members were very collaborative with the disability centre, especially regarding learning disabilities”. Also, one student [1] stressed that “Faculty members were very collaborative in terms of providing

reasonable adjustments. For example, she explained that “Faculty members were very understanding, and no one refused to provide me with reasonable adjustments.” Moreover, one student [5] mentioned that “On the contrary, the members were very receptive as long as I just told them about the need for adjustments, they agreed”. And she explained that “If I needed to split the exam into two days, they immediately agreed with that ... I saw them as very collaborative and always responding to me”.

4.3.9.2 Barriers to the provision of reasonable adjustments

Inadequate knowledge of learning disabilities, lack of awareness attitudinal issues (e.g., the concept of equality) and misconceptions about learning disabilities and reasonable adjustments were seen by participants as important obstacles that may prevent the availability of reasonable adjustments to students with learning disabilities at Saudi public universities e.g., see Table 4.41.

Table 4. 41: Participants’ perspectives on the barriers to the provision of reasonable adjustments

Barriers to the provision of reasonable adjustments	Participant group			Number of responses
	Faculty members	Disability centre/unit staff	Students with learning disabilities	
1. Inadequate knowledge of learning disabilities	√√√√√√√	√√√√	√√√	15
2. Lack of awareness of the concept of reasonable adjustments	√√√√√√	√√	-	8
3. Misconception about learning disabilities and reasonable adjustments	√√√√	√	√√	7
4. Tensions between equality and equity	√√	√√√√	√√√	9
5. Collaboration issues	√√√	√√	√√√√	9
6. Lack of diagnosis				10

4.3.9.2.1 Inadequate knowledge of learning disabilities

Having adequate knowledge of learning disabilities was considered an important aspect of the provision of reasonable adjustments. 15 out of 20 participants said, “Lack of background knowledge of learning disabilities was the main reason that prevented the provision of reasonable adjustments to students with learning disabilities” [faculty member 5]. First, the concept of “learning disabilities” was still unclear for some faculty and disability centre/units staff, so there was still some confusion. For example, one faculty member [5] said:

I see there is confusion regarding the concept of disability or learning disabilities. For example, some view not speaking English as a disability because it is a "dysfunction" that limits your performance as a student. And others, for example, some universities in America consider the student who has English as a second language as having a “learning disability”, so the concept of disability for us is still not understandable.

The lack of clarity and confusion of this concept was stated by other faculty members who questioned whether students with hearing impairments could be considered as having a learning disability [faculty member 7] and whether students who had difficulties remembering could be seen as having a learning disability [faculty member 3]. Also, the lack of clarity on the idea of what learning disabilities were was expressed by one disability centre/unit staff member [2] who questioned whether “students with speech difficulties could be classified as having learning disabilities”.

Secondly, the lack of background knowledge of learning disabilities existed among both faculty members and disability centre/unit staff members. For instance, one faculty member [5] stressed that “I had no background knowledge of learning

disabilities or students with learning disabilities... When I fell into the position that I had to teach a student who had a learning disability, it was something new for me and a difficulty that I experienced because I had no background in the educational part". This perspective was supported by another faculty member [1] who indicated that "I just have little information about learning disabilities" and one faculty member [5] also emphasized that "Faculty members have no experiences in learning disabilities". Moreover, the "inadequate" knowledge of learning disabilities was evident among disability centre/unit staff members, for instance, one staff member [3] expressed that "Honestly my background knowledge about learning disabilities is very limited ... I was shocked that some of the centre/unit staff did not know that there was such a thing as learning disabilities in special education".

4.3.9.2.2 Lack of awareness of reasonable adjustments?

The concept of reasonable adjustments was not widely known, as described by participants (6 out of 8 faculty members). Thus, a lack of awareness of the concept of reasonable adjustments prevented the provision of reasonable adjustments to students with learning disabilities. As stressed by one faculty member [5] "I previously looked at the list of students' guidance, but don't remember seeing anything like reasonable adjustments". This finding was supported by another faculty member [4] who stressed that "Honestly, in all the reports we received, I have never encountered this term, which is reasonable adjustments, and honestly in the comprehensive policies that they sent us, I don't think I had encountered anything like that". Also, a few faculty members referred to the concept of reasonable adjustments as a new "concept" for them. For example, two faculty members stressed that "Unfortunately, I have not encountered anything like that [faculty

members 3] and “honestly, this is the first time I've heard of the term adjustments, this topic is very new to me [faculty members 7]. This was explained as follows:

I started blaming myself for a student I'd had two or three years ago. I wish someone had directed us or told us to give her more time. In the end, this would have helped increase her level as well as her mental health. She needed her questions in bold, I wish someone had told us; I would have done everything possible [faculty member 3].

4.3.9.2.3 Misconceptions about learning disabilities and reasonable adjustments

Misconceptions about learning disabilities and reasonable adjustments were connected to the provision of reasonable adjustments at Saudi public universities. Thus, misconception about learning disabilities and reasonable adjustments contributed to preventing the provision of reasonable adjustments (7 out of 20 participants). To some extent, some faculty members still held the assumption that students with learning disabilities were “normal” and like other students (i.e., without disabilities or impairments). So, the question asked by some faculty members was that if those students were “normal”, then why should reasonable adjustments be provided? This question was stressed by one disability centre/unit staff member [1] who noted that “When a student with learning disabilities applies for an adjustment (e.g., the need for extra time to complete coursework), some faculty members may respond that you look normal - why I should give you more time?”. Faculty members still “did not know the situation of students with learning disabilities and considered those students as normal students: so, they were wondering why we should simplify teaching for them?” [staff 4]. This perspective about the “normality” of students with learning disabilities was also considered by some interviewed students with learning

disabilities. As expressed by one student [2], faculty members still had the idea that “we were like other students” and did not know “if you had difficulty with something, or you were like other students” [student 3]. Moreover, some faculty members “did not care if you have a disability document or registered at the centre because they believed that you were a normal student” [student 5]. Thus, the misconception of learning disabilities prevented the provision of reasonable adjustments to students with learning disabilities.

Another misconception that was still presented at Saudi public universities, and to some extent prevented the provision of reasonable adjustments, was the assumption that reasonable adjustments were just another form of “help”. To explain, one disability centre/unit staff member [1] said: “If we start with obstacles, it is possible that the first obstacle is faculty members’ unawareness of the differences between “help” and “reasonable adjustments”. Faculty members “have a misconception of reasonable adjustments” [staff 5] that they thought “meant help”. But participants said reasonable adjustments mean something different, they mean that ‘I am trying to offer you an equal opportunity, not a higher or lower opportunity; so that you can achieve academic standards” [staff 1]. However, faculty members still had this misconception about reasonable adjustments, thus from their perspectives, providing reasonable adjustments was just providing unfair help or assistance. This can be explained as follows:

When we first started tours of colleges to tell them about the centre's services. So, when we said "reasonable adjustments" it was somewhat misinterpreted, and they may sometimes have a kind of sympathy with the disability as a help. Meaning this person has a disability so let us help him (the academic

adjustments that is provided), but the adjustment does not mean Help... There may be here a gap that some expect the adjustments as a means of help, so we clarify this through our faculty visits and tours [disability centre/unit's staff 1].

4.3.9.2.4 Tensions between equality and equity

The attitude of being more “equal” in the way of teaching and learning in higher education was another challenge that prevented the provision of reasonable adjustments at Saudi public universities. Thus, the idea of “equality” or being more “equal” was a result of a misconception about learning disabilities and reasonable adjustments. As stated above, some participants (9 out of 20) had the assumption that students with learning disabilities were “like other students” [faculty member 3], and if reasonable adjustments were required, “they should be provided to all students” [faculty member 5]. Thus, the assumption of the “normality” of students with learning disabilities, and the assumption that reasonable adjustments were just another way of “helping” led some faculty members to reject the provision of reasonable adjustments, or to them preferring to provide them to all students (e.g., being more equal). As stressed by one faculty member [4], “Some faculty members rejected the idea of providing adjustments or facilities for the students' learning disabilities due to the issue of “equality” between him and others”. This meant that “equality” had a significant role in the decision of faculty members in whether or not to provide reasonable adjustments. As stressed by one student with learning disabilities [4], the provision of reasonable adjustments was subject to the concept of “equality”. Therefore, if an adjustment was provided to one student, it should be provided to all students. As mentioned by one student with learning disabilities [4]: “When I asked a faculty member to read the question for me, they responded that if

'I read this question to you, I must read it to the other students"'. As one faculty member explained [5] "At the beginning, I refused to provide the adjustment (e.g., reader) as I considered that as unreasonable. At the time, the concept of fairness was dominating my mind, and I thought that if I provided this adjustment to this student, I should provide it to the rest of the students. I wanted to be fair with everyone". Clearly, the principle of "equality" intersected with the decision of providing reasonable adjustments to students with learning disabilities, as can be illustrated below:

I have a philosophy that students with learning disabilities as members of society are like other students. Yes, their abilities differ, but I have a comprehensive philosophy that they should be like others. So, if I am going to provide objective questions, they will be provided to all students, and if I change the activity into a presentation, it will be changed for all students: I can't separate them from the others [faculty member 4].

4.3.9.2.5 Collaboration issues

Participants discussed that lack of collaboration could negatively influence the provision of reasonable adjustments. As emphasised by participants (9 out of 20) the provision of reasonable adjustments was a joint responsibility among different departments e.g., faculty members, disability centres/units, and universities. In other words, "taking care of the disabled students is a shared responsibility, it is assumed that the college, the deanships, and the faculty members participate in it. For example, if faculty members do not understand the services and adjustments, there will be a gap between the centre, the student with disabilities, and everyone that is responsible for providing the service (e.g., reasonable adjustments)" [staff 1]. However, in some cases, this joint responsibility was still not fully understood among

different departments, for example, there was “a lack of collaboration among faculty members and disability centres” [staff 4]. As a disability centre, “reasonable adjustments are available; however, this availability depends on the collaboration between faculty members and the centre; if faculty members collaborate, the adjustment is done” [staff 1]. For example, “even though students are provided with a list of adjustments they need, some faculty members don’t provide it until being contacted by disability centre” [student 4].

Furthermore, there was an absence of university support “to the disability centres/units” [staff 4] and “to faculty members” [faculty members 1, 3 & 5]. For instance, one staff member stated that the university should support the disability centre, for instance, “by following the provision of reasonable adjustments to students with learning disabilities to make sure these adjustments have been provided by faculty members” [staff 4]. Also, “faculty members need to be provided with the support from their universities when they have a student with a disability, including with learning disabilities” [faculty members 3 & 5]. For example, faculty members should be informed about the existence of students with learning disabilities, but this was not available to some faculty members (3 out of 8 faculty members). Two of the faculty members [3 and 5], shared that “I had a student with a learning disability, but no one informed me about their learning disability or the need for reasonable adjustments”.

4.3.9.2.6 The lack of diagnosis

The lack of official diagnoses was one of the biggest issues that faced disability centres/units in Saudi public universities [staff 5] as the availability of official

diagnoses determined students' ability to request reasonable adjustments. This meant that having a diagnosis "could be seen as a facilitator" [staff 7], but the lack of diagnosis could "negatively influence the availability of reasonable adjustments to students with learning disabilities in universities" [staff 3, 4, 5, & 7]. As explained by participants (7 out of 20), the issue of lack of diagnoses was complex as it was influenced by different factors and reasons as presented in table 4.42.

Table 4. 42: Factors and reasons that influenced the availability of official diagnoses.

Influencing factors	Mentioned by participant group			Number of responses
	Faculty members	Disability centre/unit staff	Students with learning disabilities	
General education				
- Low number of schools that have learning disability programmes.	√√		√√	4
- Absence of learning disability programmes in all phases of education				
Higher education:				
- Lack of diagnosis centres	√	√√		3
- Absence of disability centres/units at universities				
- Lack of experts in learning disabilities				

The issue of not having an official diagnosis often started from an early stage e.g., in elementary education. One participant [faculty member 6] stated that "Students should have their diagnosis written in their files from elementary level and moved with them in all phases of education up until university" (e.g., transition plan). But the low number of schools that had programmes for students with learning disabilities, and the absence of learning disabilities programmes in all phases of education led to a lack of identification, which as a result led to the absence of official diagnoses. For example, one participant [faculty member 4] shared that "In my city, programmes for students with learning disabilities are limited to elementary schools, meaning that when students move to middle and high schools there are no

programmes to support them". This issue could be found "in most parts of Saudi Arabia except in the capital city (Riyadh) where programmes for students with learning disabilities could be found in all phases of education, but this was also still restricted to a small number of schools in the capital" [faculty member 8].

Moreover, faculty member 8 reported that there was mostly only one teacher for students with learning disabilities in every school that had a programme for these students, and the full capacity of that school was only 9 students for every learning disability teacher. This meant that in most cases many students with learning disabilities would not be part of the programme due to the limited capacity of that school. One of the interviewed students with learning disabilities [4] supported this argument by sharing that "The problem is that not all schools have enough programmes for students with learning disabilities (resource rooms) in public or private schools. For example, I noticed my learning disabilities before entering university, but I had not had a diagnosis until university. Moreover, one student [3] stated "From middle school, I should have had an official diagnosis, but I had not had one until high school, as no one was interested". She [3] explained that "In middle school, we had a resource room (a unit for students with disabilities), but no one came and asked who need help or support".

The lack of identification and official diagnosis in general education often led to a greater problem in higher education. One of the disability centres/units staff [3] reported that due to the invisibility of learning disabilities and lack of identification, they believed there were hundreds of students with learning disabilities at the university that they didn't know about". Staff [2] reported that this was because when

students with learning disabilities graduated from high school, they didn't have an official diagnosis or were identified as students with learning disabilities. So, when they registered at that university they registered as students without a disability. Thus "the lack of official diagnosis is the biggest issue we face with students with learning disabilities as disability centres and units. A student with a learning disability rarely comes to the university with an Individual Learning Plan from when they were in elementary or middle school" [staff 5]. More specifically, "out of 30 students who come to the disability centre as potentially having learning disabilities only 2 have an official diagnosis" [staff 7]. This situation made it very challenging for the disability centres/units to cope with "since that we can't say this student has a learning disability unless there is an official report. To overcome this challenge, we had to find a diagnosis centre, but the problem was that most centres were either private or didn't diagnose individuals who were over 18 years old. In the end, we managed to find a public centre that was able to provide us with the diagnosis (free diagnosis services), so we sent students there" [staff 5].

Other issues related to diagnosis and identification in higher education were the absence of disability centres/units and experts on learning disabilities in some Saudi public universities. As stated by one of the participants [faculty member 7] "The absence of identification and the existence of disability centres/units led to neglect of students with learning disabilities, so no one knew about students with learning disabilities from the day they started their studies, until they graduated or left the university. There was no doubt that among these students (at the university) there must have been students with learning disabilities, but so far there has been no interest in this point". This may be due to the identification of this category of

students (with learning disabilities) as “weak or almost non-existent” [staff 3]. Also, in one way or another, the lack of experts contributed to this issue as explained by a participant [staff 3] in the following statement:

If there was a person who specialised in learning disabilities at the centre, it would be possible to search for a way to accommodate people with learning disabilities through a questionnaire, an inventory, conducting courses, seminars, or raising awareness. So, in this way, we could attract the group indirectly so that there would be no embarrassment or harm, but we do not have someone who deals with this category of students.

4.3.10 Emerging themes

This section presents participants’ ideas that were not related to the research questions, however, the ideas they discussed were interesting and gave more details about learning disabilities in higher education. The three major ideas participants were concerned about were “inclusion”, policies related to “admission”, and “diagnosis gap”. The next sections give more details about each idea.

4.3.10.1 The inclusion of students with learning disabilities in higher education

Two students out of the 5 interviewed students with learning disabilities gave their perspectives concerning inclusion. From their standpoints, they referred to “inclusion” as being educated with other students (e.g., without disabilities) in the same classrooms [students 2 and 3]. Students [2 and 3] were educated with students with other disabilities before they moved to classes with other students without disabilities. Both students stated that they were encouraged by the disability centres/units to move to other classes with other students. One student [2] described being moved to other classes as not good. She [2] explained as follows: “It was better

for me not to be included with other students, as I felt better alone, and I could understand more. I mean with other girls I felt shy and nervous when asking questions". Another student [3] described being in the same class with other students as "being a little bit influential". She [3] explained that "Being in a class with other students with disabilities makes us feel more understanding of each other as students. Also, when you want to participate or answer questions, you do not find it difficult to feel nervous as teachers understand the situation. But now (after moving to classes with students without disabilities) it feels a little bit difficult to explain your situation to every teacher; I hoped I was able to continue in the same class" (with students with disabilities).

4.3.10.2 The admission policy of students with learning disabilities into university

In Saudi Arabia students are obligated to meet the university entry requirements. These include the programme's requirements, and test requirements: tests that students must take after graduating from high school when they apply to universities. The results of these tests will be a part of their final GPA before applying for the desired program at the university. Students with learning disabilities are still required (due to lack of identification and diagnosis) like other students without disabilities, to do these tests and meet all the university requirements before applying for a place at the university. This situation was discussed by a few participants (3 out of 20) who felt it was unfair to treat students with learning disabilities at admission in the same way as other students without disabilities.

One participant [student 5] justified that due to the nature of the disability (i.e., difficulties in reading and writing), it was unlikely students passed those tests (which required good reading and writing skills) with a good grade to be able to apply to university. For example, one student [5] emphasised that “I know many students with learning disabilities who were unable to enter university due to their low scores in these tests. Even though it’s out of their hands to have such low scores on these standard tests (due to their difficulties), they still have the right to enter university, be educated, and be successful in their studies”. Some participants [4 out of 20] suggested that with respect to universities’ admission policy, more considerations were needed in this regard. Two participants [faculty member 2 and student 5] advocated that the admission policy needed to consider those students (i.e., students with learning disabilities) and their characteristics (e.g., reading and writing difficulties) before admission. One participant [faculty member 2] emphasised that “Those students who have learning disabilities must be highlighted from the beginning. Since they will be accepted into university, they should have a parallel path that is equal to the usual path. But since they need attention in certain aspects (e.g., their characteristics), and these aspects may be different from one student to another, it is fair that they have a special application”. This suggestion was also considered by another participant [student 5] who shared that “I know many people like me who have learning disabilities are unable to study at a university, due to the high acceptance requirements and scores. Why doesn’t the disability centre or the university provide us with a special e-link or application to apply for university?”. In this way, many students with learning disabilities could be able to join the university. Finally, one participant [faculty member 8] raised one issue related to the admission

policy, stating that “In one public university, the number of admitted students with disabilities (e.g., students with hearing impairments) is restricted to only 20 places, which makes it difficult to accept more students into that university”. He [faculty member 8] justified this as related to issues “due to the university’s capacity and the admission policy”.

4.3.10.3 The Diagnosis gap

From students' interviews, I found that there was a significant gap between the time that students with learning disabilities started to notice their learning disabilities, and the time of receiving an official diagnosis e.g., see table 4.43.

Table 4. 43: The times when students noticed their learning disabilities and received an official diagnosis

Participant	Noticing learning disabilities	Official diagnosis
Student 1	Elementary school	Middle school
Student 2	High school	University
Student 3	Middle school	High school
Student 4	Before university	University
Student 5	Middle school	Middle school

As shown in Table 4.46, 4 out of the 5 interviewed students with learning disabilities had not had an official diagnosis of their learning disabilities at the time when their learning disabilities started to appear. Instead, they waited at least until they moved to the next phase of education (e.g., elementary, middle, high school, and university) to get an official diagnosis. For example, one student [1] commented that “I noticed my learning disabilities when I was at elementary school, but when I got to middle school my learning disabilities become more obvious”. This was similar

to another student who stated that “From high school, the school identified that I had difficulties in paying attention, but I did not have an official diagnosis until my second year of university. In my second year, faculty members noticed that I had difficulties in paying attention, and sometimes I didn’t understand the lessons. I was directed by faculty members to the disability centre and directed by the centre to another centre outside the university to have an official diagnosis which was difficult to understand”.

Another student [3] stated that “From middle school, I should have had an official diagnosis, but I did not have one until high school”. She [3] explained that “In middle school, we had a unit for students with disabilities (a resource room), but no one came and asked who needed help or support”. This was supported by another student [4] who shared that “The problem is that not all schools have a resource room or enough public or private schools. For example, I noticed my learning disabilities before entering university, but I did not have a diagnosis until university. When I entered university, I said I wanted someone to help me three times until the first term passed and my grades were bad, and I failed two courses. Then I was directed to the disability centre which directed me to another centre to be diagnosed”.

4.3.11 Summary of Section Two

The qualitative data analysis (part two) presented participants’ conceptualisations of learning disabilities and reasonable adjustments. Generally, most faculty and disability centre/unit staff conceptualised learning disabilities as difficulties in reading, writing, and arithmetic which could be related to difficulties in one or more of the basic psychological processes. Secondly, some participants

(mostly faculty members) were unfamiliar with the concept of reasonable adjustments and some (a few faculty and some staff members) gave different meanings to the concept of reasonable adjustments such as “changes in teaching methods”, “reasonable efforts to modify the requirements” and a way of “helping” students with learning disabilities to be more successful in higher education. However, a few staff members at disability centres/units stressed that reasonable adjustments must not conflict with the learning, academic outcomes or affect other students in the same learning environment e.g., students without disabilities.

Additionally, faculty members, disability centre/unit staff, and students with learning disabilities had mixed perspectives about the availability of reasonable adjustments. Most interviewed students with learning disabilities described that reasonable adjustments were available at their universities. By contrast, disability centre/unit staff and faculty members were divided in their opinions about the availability of reasonable adjustments. For example, some disability centre/unit staff and faculty members expressed that some adjustments existed in their universities, such as extra time for exams and coursework as well as a different room for exams. However, some stressed that the availability of such adjustments still did not exist in their universities. This continuing diversity of perspectives was also evident with regard to the availability of policy in providing reasonable adjustments, where some considered that there was no policy on reasonable adjustments in their universities; while others said that there was a policy. However, issues such as lack of awareness or application may have negatively influenced the effectiveness of such a policy.

Moreover, despite most faculty members being interested in providing reasonable adjustments, the capacity and availability of resources in providing these

reasonable adjustments were challenged at Saudi public universities. For example, most participants stressed that there was a lack of expert staff in learning disabilities as well as courses and training on the provision of reasonable adjustments. Also, some participants raised that there was a lack of disability centres/units and staff as well as a need for more funds. Moreover, it was discussed that there was inadequate understanding, lack of awareness and misconceptions about learning disabilities and reasonable adjustments and a lack of collaboration among various departments (e.g., faculty members, university leaders, and disability centres/units). Lastly, there was an emphasis on increasing awareness of learning disabilities and reasonable adjustments, developing effective communication and collaboration, encouraging the disclosure of learning disabilities, and recognizing learning disabilities as a disability category in all Saudi public universities. The next chapter discusses the study's findings in relation to the research questions, the broader literature, and the theoretical framework of the study.

Chapter Five: Discussion of Findings

5.1 Introduction

The purpose of the study was to explore the provision of reasonable adjustments to students with learning disabilities in Saudi public universities as well as identify factors (e.g., facilitators and barriers) toward the provision of reasonable adjustments to those students. As I mentioned in the literature review chapter, the Saudi-based literature came to the conclusion that despite some willingness (e.g., see Bakri, 2019; Alalyani, 2021) (but also a lack of willingness, e.g., Abed & Shackelford, 2020) of faculty members toward the provision of reasonable adjustments, the provision of reasonable adjustments itself is still limited in Saudi higher education (e.g., see Alkhashrami, 2008; Althuwabi 2009; Arafah, & Mohammed, 2015; Alwabli & Binomran, 2018; Abed & Shackelford, 2020; Binbakhit 2020; Hariri 2020). Yet, to date, no study has explored in depth why the provision of reasonable adjustments is still limited, especially for students with learning disabilities in Saudi higher education institutions.

A sequential mixed method design consisting of two phases of data collection and analysis was used to explore the aims of the study. In the first phase, 178 faculty members and 44 staff members at disability centres/units completed two different online questionnaires. In the second phase, eight faculty members, seven disability centre/unit staff members, and five students with learning disabilities were interviewed through online semi-structured interviews. Further details of participants, data collection procedure, data analysis methods, and ethical considerations can be found in the methodology chapter. Also, the findings of the study can be found in the

results chapter which is presented under two sections; section one presents the quantitative findings and section two presents the qualitative findings.

This chapter integrates the quantitative and qualitative findings and discusses them under two sections; section one discusses the findings considering ideas from the relevant literature and with reference to the research questions, and section two in relation to the study's theoretical framework (Bronfenbrenner's Ecological Systems Theory). The aim of the data integration is to explore the availability of the provision of reasonable adjustments to students with learning disabilities in Saudi public universities, as well as identify facilitators and barriers toward such a provision considering the following research questions:

1. How do students with learning disabilities, faculty and staff members at disability centres/units describe the provision of reasonable adjustments at Saudi public universities?
2. How do faculty and staff members at disability centres/units understand the terms learning disabilities and reasonable adjustments in Saudi public universities?
3. To what extent and in what ways are faculty members interested in the provision of reasonable adjustments to students with learning disabilities in Saudi public universities?
4. How do faculty and staff members at disability centres/units describe the capacity and availability of resources regarding the provision of reasonable adjustments in Saudi public universities?
5. What are the perspectives of students with learning disabilities, faculty, and staff members at disability centres/units about reasonable adjustments policies at Saudi public universities?
6. What are the facilitators and barriers that students with learning disabilities, faculty and staff members at disability centres/units recognize with regards to the provision of reasonable adjustment at Saudi public universities?

The study's findings summarised that some types of adjustments were available to students with learning disabilities, but they were limited to some Saudi-specific regions, such as middle/central and western universities, and were sometimes based on 'personal diligence' rather than existing policy. This is due to the fact that (as found in the study) reasonable adjustment policies existed in some Saudi public universities but not in others due to a lack of disability-related vision and policy in Saudi higher education. Second, despite faculty members' interest in the provision of reasonable adjustments, many participating faculty members were unfamiliar with the concept or defined it in different ways, resulting in different understandings of the concept. Furthermore, some faculty members appeared to have misconceptions about learning disabilities that they often linked to ideas about normalcy, and some were concerned about tensions related to equality and the provision of reasonable adjustments. Additionally, both faculty and staff at the disability centres/units (where they existed) requested more training on disability and reasonable adjustments and reported that the disability centres/units still required more human resources (e.g., staff and expert staff in learning disabilities), as well as more funds to effectively provide reasonable adjustments. Finally, participants emphasised the importance of raising awareness, creating more disability centres/units, and recognizing learning disabilities as a disability category by Saudi public universities. These findings demonstrate the many challenges involved in providing reasonable adjustments and the many factors that can impact their effectiveness. Following that, I discuss those findings in light of the existing literature. It is worth noting that, due to a lack of Saudi studies on this topic (see Chapter 2, Table 2.2), some of these studies are used repeatedly throughout the chapter.

5.2 Section One: Discussion of the Findings Considering the Research Questions.

5.2.1 RQ1: Reported Adjustments by Participants

Question one inquired about participants' perspectives on the availability of reasonable adjustments at their Saudi public universities. The findings of the study (phase two) identified a variety of adjustments (17 adjustments) that were available to students with learning disabilities, such as a reader, a writer, a note taker, extra time on exams and coursework, different exam rooms among others (see Chapter 4 Tables 4. 44 and 4. 36). However, as supported by the interviews, reasonable adjustments were limited to some Saudi-specific regions, such as middle/central and western universities, and were sometimes based on 'personal diligence' rather than existing policy.

Due to a lack of research on the subject, knowledge about the availability of reasonable adjustments for students with learning disabilities in Saudi Arabia is limited. Only a few studies investigated the provision of reasonable adjustments to this disability group, and the majority of those studies were conducted in middle/central (e.g., Binbakhit, 2020) and Western Saudi public universities (e.g., Hariri, 2020; Abed and Shackelford, 2020), making comparison and contrast difficult. A study conducted at one public university in the middle/central region discovered that students with learning disabilities had access to a variety of adjustments, such as extra time, a different room, divided exams, large font sizes, and so on (Binbakhit, 2020). However, the same study reported that the policy of the provision of reasonable adjustments was absent; resulting in difficulties supporting the provision of reasonable adjustments (as discussed later).

Similarly, to Binbakhit's (2020) findings, interviewed students with learning disabilities in this study reported that some adjustments were available, such as larger font size, different rooms for exams, extra time on exams and coursework, and others (see Chapter 4, Table 4. 45). However, students in this study stated that, despite this availability, they were having difficulties, such as being unaware of available support for receiving those adjustments, as discussed later. Additionally, only two studies were conducted in Saudi Arabian Western universities (Hariri, 2020; Abed and Shackelford, 2020) that examined the provision of reasonable adjustments to students with learning disabilities. According to Hariri (2020), students with learning disabilities were not given academic support such as lecture notes, extra time for course work, repeated instructions when needed, presenting information in a different format, a note taker, or taking exams in a different room. Another study conducted in a western Saudi public university (Abed and Shackelford, 2020) discovered that, while students with learning disabilities benefited from some academic support, such as lecture notes, there was no clear role for receiving support services. Students with learning disabilities, according to the same study, were ignored and not officially included in consultations about the provision of reasonable adjustments.

Similar to Abed and Shackelford's findings (2020), in this study, two interviewed faculty members from Western universities raised that there were some available adjustments e.g., extra time on exams and coursework to students with learning disabilities, but this was offered based on the faculty's 'personal diligence', not existing policy. This can explain Abed and Shackelford's (2020) findings as what was likely offered was based on the faculty's diligence due to the absence of policy

supporting the provision of reasonable adjustments to this group of students. Also, as claimed in this study by one interviewed faculty member, when comparing students with learning disabilities to students with other disabilities (e.g., students with hearing impairments), there was no clear plan from either the university administration or those working in this field regarding this disability category.

Nevertheless, to date, no published study has explored the provision of reasonable adjustments to students with learning disabilities in southern, northern, and eastern public universities in Saudi Arabia. However, participants in phase two from southern, northern, and eastern Saudi public universities raised that there was no availability of reasonable adjustments to students with learning disabilities in their locations. For example, two faculty members and one staff member from northern universities confirmed that there was no availability of reasonable adjustments to this disability group due to lack of recognition for this kind of disability, as explored later. Also, one faculty member from an eastern University stressed that there were no adjustments for those students as this disability category is still neglected which is consistent with Abed and Shackelford's (2020) study.

The study's findings highlighted that despite several adjustments being available to students with learning disabilities, most of these were available in middle/central and western universities (though in western universities they were based on personal diligence), with the availability of reasonable adjustments still limited in other regions in the north, south, and east. This finding highlights the importance of ensuring the availability of reasonable adjustments in all Saudi regions

to allow equal access to educational opportunities and the provision of reasonable adjustments across Saudi higher education.

5.2.2 RQ2: Defining the Terms Learning Disabilities and Reasonable Adjustments

The second research question sought to elicit participants' perceptions of the terms learning disabilities and reasonable adjustments. People's ideas and ways of thinking, as suggested by the broader literature, can have an impact on their associated practices (Arishi, 2020; Boyle et al., 2013). As a result, the study needed to consider how faculty and staff members of disability centres/units understood learning disabilities and reasonable adjustments.

5.2.2.1 Understanding Learning Disabilities

According to the integrated data, learning disabilities were defined as a difficulty within the individual that affected students' abilities to access and demonstrate knowledge. This was evident in the responses of participants in both phases. For example, in phase one, 57% of faculty members and 59% of staff members at disability centres/units agreed that learning disabilities were a disorder in one or more of the basic psychological processes involving the understanding and use of written or spoken language. In phase two, ten out of fifteen faculty and staff members perceived learning disabilities as difficulties in cognitive skills, manifesting as difficulties in perception, memory, attention, reading, writing, and mathematics.

To the best of my knowledge, no prior study has examined how the term learning disabilities is conceptualized within the Saudi context. However, within the Saudi literature, difficulties in e.g., memory, reading (Homaidhi, 2019), writing

(Binbakhit, 2020), perceiving information (Alwabli, 2017), comprehension and understanding (Bakri 2019) were all mentioned in the context of learning disabilities or as difficulties that students with learning disabilities often have. This is also in line with Alharthi (2019) who stated that learning disabilities (difficulties in Arabic translation) involved two categories which were developmental learning difficulties and academic learning disabilities; developmental learning difficulties referred to language and mobility difficulties while academic learning difficulties referred to dyscalculia, dysgraphia, or dyslexia.

Conceptualising learning disabilities from this perspective as a difficulty within the individual in this study is consistent with Saudi literature as well as policy. For example, the Saudi Ministry of Education, in the first part of the definition of learning disabilities stated that “learning disabilities are disturbances in one or more of the basic psychological processes involved in understanding and using written or spoken language which manifests itself in disorders of listening, thinking, speaking, reading and writing” (Ministry of Education, 2016, p.11).

However, it could be argued that this way of thinking can be related to the medical model of disability. The medical model, for example, sees individual difficulties (impairments) as the cause of disability (Barnes & Mercer, 2003) and reinforces ideas about ‘normality’ (Shyman, 2016). This way of thinking is associated with the use of diagnosis and labelling of students (Haegele & Hodge, 2016) which might lead to stigmatization but also secures access of students with disabilities to educational opportunities (Waddington, 2011).

However, in the medical model, factors external to the individuals e.g., social, and cultural factors, are not considered with regard to what causes disability (Barnes & Mercer, 2003). This idea was also explored in both questionnaires (e.g., see item 2 item in part II of both Questionnaires). For this item, most of the faculty and staff members at the disability centres/units reported they agreed that social, cultural, or environmental factors could cause a learning disability which is consistent with ideas of the social model of disability. However, data obtained from the interview (phase two) did not support this view, as a few participants (6 out of 15) commented that learning disabilities must not be the result of another disability, issues related to family, psychology, or intelligence (as shown by a low IQ score) (however, most participants did not make this point). This view also reflects the Saudi policy (e.g., the second part of the definition of learning disabilities) which indicates that learning disabilities must not be the result of a mental, auditory, visual, or other type of disability, or learning or family care circumstance (Minister of Education, 2006, p. 11).

Therefore, local policy and participants' views are not consistent with the social model of disability perspective which considers that social and environmental factors have a role in what causes disability (Dirth & Branscombe, 2017). More particularly, the advocates of this model do not view the disability as a personal tragedy (Albrecht et al., 2001); instead, they see it as an impairment caused by social and environmental barriers (Dirth & Branscombe, 2017). Thus, the social model perspective focuses on exposing/removing social barriers e.g., inequality, inaccessibility, and discrimination against disabled people (Polrachom, 2017) which is less consistent with the Saudi Ministry of Education's definition of learning

disabilities or with participants' perceptions about what counts as a learning disability.

5.2.2.2 What counts as a learning disability?

What counts as a learning disability highly depends on the participants' views and understandings of disability as well as the Saudi education policy. As discussed above, the medical model's view dominated participants' perspectives more than that of the social model. Interestingly, the medical model of disability is more consistent with the ideas discussed in Saudi literature (e.g., Alharthi, 2019; Homaidhi, 2019; Alwabli, 2017; Abed & Shackelford) and Saudi educational policy (e.g., see Saudi Ministry of Education, 2016; King Saud University, 2018). However, this model is less consistent with the perspectives proposed in the broader literature on the inclusion of students with disabilities (e.g., Vitello & Mithaug, 1998; Ainscow, 2005; Hockings, 2010; Waddington, 2011). As stated by Vitello and Mithaug (1998) and Ainscow (2005), inclusive education is concerned with eliminating barriers experienced by students with disabilities and responding to the diverse needs of these students. In other words, inclusive education refers to “ways in which pedagogy, curricula and assessment are designed and delivered to engage students in learning that is meaningful, relevant and accessible to all” (Hockings, 2010, p.1). Hence, in this regard, inclusive education avoids segregating students with disabilities, considers the diversity of students, enhances participation, and ensures accessibility to all students.

Therefore, as this study concerned the inclusion of students with learning disabilities, it could be critical to not view learning disabilities from a single

preceptive, i.e., the medical model of disability. This is because viewing learning disability from only the medical model meant that the social barriers that could also play a role in limiting students' access to educational opportunities were not properly considered (Waddington, 2011). It was vital to think about learning disabilities from a 'holistic' perspective that considered both the individual and social and environmental factors when viewing the disability. In other words, there was a need to integrate both the views of the social and medical models of disability to develop a holistic picture of learning disabilities, which was necessary to promote inclusivity in higher education (Collins et al., 2019; Couzens et al., 2015; Barkas et al., 2020).

5.2.2.3 Understanding Reasonable Adjustments

The second part of research question two concerned participants' understanding of the term reasonable adjustment. The study found that there was much uncertainty about the term reasonable adjustments and different meanings of this term among participants e.g., adaptations made to curriculum and assessments, modifications made in terms of student requirements and a sense that reasonable adjustments is a form of 'help' offered to students with learning disabilities. This highlighted that reasonable adjustments were understood differently by different stakeholders, or they were not understood at all as discussed next.

5.2.2.4 Different understanding of the concept

In some of the broader literature, reasonable adjustments are defined as slight changes in how the information is presented or accessed by students with disabilities (Conderman & DeSpain 2017; Gregg, 2012). Practically, reasonable adjustments are understood as adjustments made to the methods of teaching,

learning and assessments which enable access to learning (Beech, 2010) – but without changing the actual content being taught which is discussed later (Alhossein, 2014). This definition or understanding is consistent with what was reported in the interview as two faculty members referred to reasonable adjustments as adaptations/changes to the methods of teaching, exams, or the curriculum (See Chapter 4, Section 4.3.4.3).

Within the Saudi literature, to the best of my knowledge, there is still no clear definition of the concept of reasonable adjustments, however, one Saudi public university in the middle/central region defines reasonable adjustments within their institutional policy (e.g., disability policy) as any adjustments in programmes, policies, or practices that enable students with disabilities to perform in the program or to have rights and benefits like nondisabled students which may include reasonable adjustments to procedures, such as teaching, learning, and assessment methods to be accessible to all students (King Saud University, 2018). This definition is generally similar to the broader literature as mentioned above (e.g., see Conderman & DeSpain 2017; Gregg, 2012).

However, a small number of participants e.g., one faculty member and one staff member in phase two defined reasonable adjustments as help offered by universities to students with learning disabilities; however, the word 'help' is less consistent with the definition of reasonable adjustments as discussed in the broader literature. For example, according to the literature, providing reasonable adjustments could 'help' remove barriers experienced by students with learning disabilities (Luke & Schwartz, 2007) by providing alternative teaching and learning methods based on

their specific needs (Trimmis & Bessas, 2016). But the word 'help' here could be indicative of the importance of or the need for the provision of reasonable adjustments, not a definition of reasonable adjustments.

However, considering the context of this study (Saudi Arabia), defining reasonable adjustments as a means of help could be critical. As explained later, Saudi society views people with disabilities as people who are in need of sympathy (Saudi Authority of People with Disabilities, 2021). Therefore, the word 'help' considering the context of the study can reflect how participants (as members of society) view people with a disability as needing sympathy (Murugami, 2009). As supported by two interviewed staff members at disability centres/units, some faculty members defined reasonable adjustments as a means of helping to show sympathy to people with disabilities. Therefore, as raised by the interviewees, the implication for defining reasonable adjustments as a means of help (within the educational context) might lead some faculty members to reject the provision of reasonable adjustments due to the assumption that students with learning disabilities had no visible disabilities (as discussed later under the concept of normality).

The findings related to this part can highlight that rereferring to reasonable adjustments as help is not only problematic, but it might also lead to assumptions that can limit the provision of reasonable adjustments resulting in limited access to educational opportunities for those students. Therefore, it is critical to ensure that all participants share a common understanding of the concept of reasonable adjustments. Next, I discuss the lack of familiarity with this concept among most participating faculty members.

5.2.2.5 Uncertainty of the concept

As well as different understandings of the term reasonable adjustments among some of the participants, there was uncertainty about this concept, especially among participating faculty members. Unfamiliarity with the concept of reasonable adjustments among faculty members can be considered as a global issue, as evidenced by studies conducted in Spain (Sandoval et al., 2021), England (Kendall, 2018), and Saudi Arabia (in this study). For example, in Spain, a study interviewed 119 faculty members of 10 public universities about their beliefs and practices regarding the provision of reasonable adjustments and found “many of them openly admitted that they did not know exactly what the concept meant and some of them defined it in an unclear or imprecise manner” (Sandoval et al., 2021, p.735-736). Also, in England, Kendall (2018) through a semi-structured interview questioned 20 faculty members at a university in the north of England about their experiences of supporting students with disabilities; faculty members reported that it was not clear to what extent adjustments should or could be made.

Similarly, in this study (in Saudi Arabia), although 46.6% of faculty members agreed that the term reasonable adjustments described the adaptations that are made to instruction and assessment, 35.9% of faculty members were not sure about this point. Also, in phase two, 5 out of 8 faculty members consistently commented that the concept of reasonable adjustments was new to them. Uncertainty in higher education regarding the concept of reasonable adjustments may be due to its nature e.g., as a policy term. Thus, the findings of this study and others (e.g., Walker, 2017; Timmerman and Mulvihill, 2015) stressed that the concept of reasonable adjustments must be clarified within higher education, especially, for faculty

members. This is because a lack of familiarity with this concept might lead to different understandings and implementation challenges as discussed above (Section 5.2.2.4).

5.2.2.6 *What counts as a reasonable adjustment?*

There is ongoing tension in the broader literature regarding what counts as reasonable adjustments and academic standards (Kendall, 2018; Karellou, 2019). In phase one of this study, most faculty members and some staff members did not recognise a tension between reasonable adjustments and academic standards. However, in phase two, three staff members and one faculty member argued that what is reasonable is what does not conflict with the learning outcomes, academic standards, and other students in the same learning environment e.g., students without disabilities (see Chapter 4, Table 4.30).

In the study, two staff members and one faculty member during the interview raised that what is reasonable is what does not conflict with the learning outcomes. As claimed by one staff member at the university level, students' learning outcomes must be evident and must not be due to the provision of reasonable adjustments. Similar to the broader literature, the provision of reasonable adjustments must not change the actual content 'being taught' (Becker & Palladino, 2016) or conflict with the learning outcomes (Elliott et al., 2011). In other words, reasonable adjustments must not simplify the content for students with learning disabilities, instead, students with learning disabilities are expected to study the same content but perhaps use alternative ways of accessing it e.g., lecture notes before the lecture.

This way of approaching the needs of students with learning disabilities via different ways of accessing the curriculum is debated within the broader literature as explained next. As claimed by Sharp and Earle (2000) if reasonable adjustments are about providing students with different ways of access to the same assessments/exams why should they not be provided to all students? However, Griful-Freixenet et al., (2017) note that sometimes providing different ways of access to curriculum to all students with or without disabilities may not be beneficial; as, e.g., was supported by the findings of their study, providing lecture notes before the lecture to all students resulted in some non-disabled students not attending the lecture (Griful-Freixenet et al., 2017).

A second point raised by the findings of the study was that the provision of reasonable adjustments must not change the academic standards of the university. As raised in phase two of this study the provision of reasonable adjustments must not interact with universities' academic standards. This is consistent with broader literature that the provision of reasonable adjustments should not alter the academic standards or rigour of a course by lowering or significantly altering essential requirements (Los Santos, et al., 2019). In this regard, even with the use of reasonable adjustments, students with learning disabilities were expected to meet the same academic standards as other students without disabilities.

However, in this study, one interviewed faculty member argued that the university academic standards did not consider the difficulties of students with learning disabilities e.g., reading and writing difficulties. This is consistent with the argument made by James (2003) that there is a need to consider students' abilities

in assessment. This point raises the question as to whether meeting students' learning needs and abilities or meeting academic standards should be the priority (Coates, 2010). However, meeting academic standards is still a concern in higher education; as found in Ryder and Norwich's study (2019), despite many participants being unsure, 14% admitted that the provision of reasonable adjustment may negatively influence academic standards. Therefore, this can highlight that in addition to the need to clarify what counts as reasonable adjustments, there is an ongoing tension between the provision of reasonable adjustments, learning outcomes and academic standards.

5.2.3 RQ3: The Faculty's Interest in the Provision of Reasonable Adjustments

The third research question concerned faculty members' interest towards the provision of reasonable adjustments for students with learning disabilities at Saudi public universities. The findings of the study showed that faculty members were very interested in providing the listed adjustments on their questionnaire (see Questionnaire 1 Part IV). In phase two faculty explained that they were very interested in the provision of reasonable adjustments to ensure students with learning disabilities' rights in learning, remove barriers to learning, and promote their academic success. However, the findings of phase two also revealed that faculty's assumptions regarding the concepts of normality and equality may influence their level of interest in providing reasonable adjustments.

5.2.3.1 Level of Interest

As I discussed earlier, faculty members indicated a lack of familiarity with the concept of reasonable adjustments, but at the same time, they were very interested

in the provision of reasonable adjustments. It may sound like there is an inconsistency between the faculty's understanding of reasonable adjustments and their interest in such a provision, but it is not surprising. Many recent studies (e.g., see Bakri, 2019; Ryder and Norwich, 2019; Schabmann et al., 2020; Sandoval et al., 2021; Little & Gimblett, 2023) found similar results to my study. For example, in Spain, Sandoval et al. (2021) interviewed 119 faculty members from 10 public universities about their knowledge and beliefs about reasonable adjustments and found that a lack of knowledge existed despite faculty members' positive attitudes toward the provision of reasonable adjustments. In Saudi Arabia, Bakri (2019) through a mixed-method study investigated the ability and willingness of female faculty members to provide reasonable adjustments and found that despite the faculty's uncertainty about how to provide reasonable adjustments, they reported being very willing in such a provision.

Studies have also demonstrated that the faculty's personal beliefs and assumptions can have the most direct influence on their interest in the provision of reasonable adjustments to students with learning disabilities (Abed & Shackelford, 2020; Bakri, 2019; Zhang et al., 2010). In the study, despite faculty members showing positive personal beliefs in phase one (see Questionnaire 1, Part II), a few students with learning disabilities and staff members in phase two raised that some faculty members in their universities still held negative personal beliefs and assumptions. For example, some of the interviewed students with learning disabilities and staff at disability centres/units indicated that some faculty members still upheld the idea of "normality" which assumed that students with learning disabilities are just like other students without disabilities. Thus, some faculty

members refused the provision of reasonable adjustments just because they didn't see any sign of visible disability; assuming that those students didn't have a disability.

This assumption (which is explained later in more detail) can impact the faculty's interest in the provision of reasonable adjustments. Abed and Shackelford (2020) investigated the educational support for undergraduate and postgraduate students with learning disabilities attending one Saudi public university and found that faculty members were not willing to invest in additional efforts in responding to the needs of students with learning disabilities. As reported by a few interviewed students with learning disabilities in the same study, some faculty members still did not believe in learning disabilities due to the invisibility of learning disabilities (Wolanin & Steele, 2004).

Second, as raised by the interview, some faculty members even if they were interested in the provision of reasonable adjustments, may have preferred not to provide them in order to be fair to other students, thus assuming that fairness could be achieved only if all students were treated in similar ways. As discussed earlier, many faculty members were not willing or interested in providing reasonable adjustments (Trimmis & Bessas, 2016; Zhang et al., 2010), because of their concerns about being fair to all students (see Chapter 4 Section 4.3.9.2.4). The study, therefore, highlighted that faculty's interest in the provision of reasonable adjustments is critical, however, without positive assumptions and personal beliefs, faculty's interest alone may not be enough to promote the provision of reasonable adjustments. Hence, to enhance practice (e.g., the provision of reasonable

adjustments), Saudi public universities would consider educating faculty members to enhance their assumptions and personal beliefs.

5.2.3.2 The Importance of the Provision of Reasonable Adjustments

As mentioned above, in phase one, faculty members were very interested in providing the listed adjustments on their questionnaire (see Questionnaire 1 Part IV). In phase two of the study (the interview) faculty members explained their interest in the provision of reasonable adjustments to remove barriers to learning, provide equal educational opportunities, ensure the right of students with learning disabilities to learn, and ultimately promoting their academic success.

Removing barriers to learning and improving access to curriculum and assessment is important to the academic success of students with learning disabilities in higher education (Cortiella & Horowitz, 2014; Barazandeh, 2005; Timmerman & Mulvihill, 2015). This is because barriers to learning are one of the most reported challenges faced by students with learning disabilities during their studies (e.g., see Cortiella & Horowitz, 2014; Trimmis & Bessas, 2016; McGregor, et al., 2016; Weis et al., 2016). This is consistent with this study that found (phase two) that some challenges students could face were related to their characteristics such as difficulties in maintaining focus, understanding information, organizing thoughts, and expressing ideas. Those findings were also in line with Fuller et al., (2004) who stressed students with learning disabilities found it difficult to access lectures (taking notes) and written assignments due to their learning difficulties.

To remove barriers to learning and provide students with learning disabilities with equal educational opportunities as far as possible, there might be a need to

modify the learning environment through alternative methods of accessing or presenting information (Weis et al., 2016) in the form of reasonable adjustments (Waddington, 2011). In the study, a few interviewed faculty members commented that there was a need to provide students with learning disabilities with equitable opportunities (explained later) during teaching and learning such as extra time to help those students reach their desired goals. Trimmis and Bessas (2016) also supported that instructors must provide students with learning disabilities with tailored teaching and assignment methods such as lecture recordings, extra credit, or oral presentations instead of written assignments.

As emphasised by a small number of interviewed faculty members, the benefit of those different teaching, learning or assessment methods was that they could enable the academic success of students with learning disabilities. Within the broader literature, different studies have supported that students with learning disabilities who used reasonable adjustments reported fewer assignment difficulties (McGregor, et al., 2016), better grades (closer to the average of their peers) (Trammell, 2003), and overall achieved more success in their courses (Couzens et al., 2015). This may explain why participating faculty members perceived reasonable adjustments to be important.

5.2.4 RQ4: Capacity and Availability of Resources

Question four aimed to explore the perspectives of faculty members and staff members at disability centres/units regarding the capacity and availability of resources when it came to the provision of reasonable adjustments in Saudi public universities. The findings of the study indicated that the capacity and availability of

resources in Saudi public universities were challenged by a lack of staff (including expert staff) in learning disabilities, as well as a lack of professional development programmes and training. Additionally, more financial support for disability centres/units was seen as required.

5.2.4.1 Financial Resources

Most interviewed staff members at the disability centres/units felt unhappy with the provided financial support by their universities. As stressed by one staff member, finance could be a barrier for disability centres/units, therefore, there was a need for a dedicated budget for students with disabilities. However, according to participants, no budget was allocated specifically for disability centres/units.

Within the broader literature, financial support is seen as critical to the provision of reasonable adjustments as it increases the opportunities for academic institutions to make those adjustments (Ineson & Morris, 2006). For example, a recent study conducted in two Saudi universities found that one challenge to the provision of reasonable adjustments was the lack of required financial support to make this practice possible (Hariri, 2020). Also, in the UK a study conducted by Ineson and Morris (2006) concluded that the quality of the provision could be different if financial support was not the same across all academic institutions including universities. Therefore, in order for universities via disability centres/units to implement the provision of reasonable adjustments, there is a need for financial support to secure such a practice.

A possible reason for the inadequate funds reported in this study and similar studies, e.g., Hariri (2020), in Saudi Arabia may be due to the recent changes in the

Saudi higher education system. For example, in a short period, the number of Saudi public universities jumped from 10 to 29 public universities, however, the allocated funds from the Saudi Ministry of Education have not increased significantly (Ministry of Education, 2022), resulting in a gap between the required support and the available funds. Furthermore, public universities in Saudi Arabia are becoming required to become financially independent under the Saudi Vision 2030 and the New University System Program (Bureau of Experts at the Council of Ministers, 2023). For example, instead of being fully reliant on the Saudi Ministry of Education in terms of funding, public universities are encouraged to secure their own financial resources.

It can be said that funding issues are recognised by the new Saudi Vision 2030, through encouraging universities to establish more sustainable financial resources which can contribute to a more sustainable higher education system. This is consistent with the findings of the study as one staff member recommended that in order for disability centres/units to have independent budgets there was a need to become an institute rather than a centre or a unit which could allow them to have their own budget.

The findings highlighted that funds are essential to the provision of reasonable adjustments. However, as the Saudi higher education system began operating differently under Saudi vision 2030, Saudi public universities via disability centres/units could secure external financial resources to be able to provide students with learning disabilities with the required support.

5.2.4.2 Informational Resources e.g., training

The study found that in addition to financial support, more training was needed to improve faculty and staff members' ability to make reasonable adjustments for disabled students. For example, in phase one of the study, 90% of faculty members reported that they had not received any training related to reasonable adjustments or disability. In phase two, more than half of the faculty members raised that no training was offered to them by their universities. Also, even though 43% of staff at the disability centres/units claimed (in phase one) that they had received disability training, in phase two (the interview) most emphasised the level of training had yet to reach the desired level, especially regarding reasonable adjustments.

Within the broader literature, there is increasing emphasis on the importance of available training to the provision of reasonable adjustments, not only for faculty members but also for staff members at disability centres/units (e.g., see Trimmis & Bessas, 2016; Lipka & Shecter-Lerner, 2020; Murray et al., 2008; Binbakhit, 2020; Little & Gimblett, 2023). The training, for example, can enhance the faculty's willingness to provide reasonable adjustments (Abdella, 2018; Park et al., 2012) and improve the experiences of faculty members and students with learning disabilities (Becker & Palladino, 2016). Also, training can help staff members determine which reasonable adjustment is more suitable for a particular student and inform faculty members about the needs of students with learning disabilities for reasonable adjustments (King Saudi University, 2013; Shaw & Dukes, 2006). Thus, without adequate knowledge e.g., through training, it can be difficult for staff members to support students with disabilities (Binbakhit, 2020).

Despite the significance of training, researchers still reported a lack of training and professional development programs for both faculty members (Schabmann et al., 2020; Sandoval et al., 2021; Little & Gimblett, 2023) and staff members at disability centres/units (Binbakhit, 2020). For example, studies in Spain (Sandoval et al., 2021), Germany (Schabmann et al., 2020) and the UK (Little & Gimblett, 2023) reported uncertainty about how to meet the needs of students with disabilities through the provision of reasonable adjustments due to a lack of training. In Saudi Arabia, Bakri (2019) through a mixed-method study found that faculty members had no training on the provision of reasonable adjustments and thus many were still unsure how to meet the needs of students with learning disabilities due to the lack of disability-related training. Therefore, most faculty members in this study asked for more training.

Furthermore, 4 out of 7 interviewed staff members in the study reported the need for more training, especially regarding the provision of reasonable adjustments. As emphasised by one staff member, there was a need for more courses e.g., in how to adapt the curriculum and work with students with learning disabilities. To the best of my knowledge, most of the Saudi literature (e.g., see Hariri, 2020; Bakri, 2019; Abed & Shackelford, 2020) focused on the availability of training for faculty members – not staff members at disability centres/units in Saudi public universities. However, several Saudi studies (e.g., Arafah & Mohammed, 2015; Alwabli & Binomran, 2018) mentioned that non-academic staff members at Saudi public universities needed more disability-related training to be able to work with students with learning disabilities. This is consistent with the findings of this study.

The study's findings highlighted that available training to staff members offered inside and outside of their universities was very limited. As explained by the interview, most of the provided training by the disability centres/units was for faculty members, not staff members who worked in those centres/units (e.g., because of the assumption that training was mostly needed by faculty members, not staff members). Furthermore, as emphasised by the interviews, even the available courses outside of Saudi public universities (e.g., provided by private or public institutions) were often not related to disability and the provision of reasonable adjustments. Therefore, the study's findings can argue that staff members at disability centres/units in Saudi Arabia have access to limited professional developmental programmes (e.g., training) inside and outside of their academic institutions.

The study's findings emphasised that providing adequate training is critical for both faculty members and staff members at disability centres/units. However, staff members at disability centres/units were not provided with enough training opportunities inside and outside of their academic institutions. Therefore, it is critical for universities to create a new course focused on disability and reasonable adjustments or advocate for more training opportunities for their staff members at disability centres/units. Without enough training opportunities, it will likely be difficult for staff members to keep up with up-to-date knowledge e.g., regarding the provision of reasonable adjustments.

5.2.4.3 Human Resources e.g., expert staff members

Though in phase one, 36% of staff members agreed that the university actively equipped disability centres/units with staff who were experts in learning disabilities, 27% disagreed (see Questionnaire 2, Part III). This finding was also supported by phase two as a majority of staff members at disability centres/units and a minority of faculty members reported a shortage of staff members with expertise in learning disabilities.

In the literature review chapter, disability centres/units were discussed as responsible for evaluating students' requests for reasonable adjustments and providing students with access to reasonable adjustments (King Saud University, 2018; Shaw & Dukes, 2006). It can be argued that the role of disability centres/units was more about ensuring access, therefore, the need for expertise could be seen as less important. However, another role of disability centres/units' staff members was to determine which reasonable adjustment was suitable for a particular student (King Saudi University, 2013). In this case, staff members were required to evaluate the needs of students with learning disabilities to be able to provide them with the most helpful adjustments.

Therefore, the lack of human resources with the required expertise at disability centres/units might limit the provision of reasonable adjustments (Binbakhit, 2020). As discussed in this study (phase two), most staff members at disability centres/units stated the number of specialists was very small compared to the centre's many responsibilities. This is similar to Binbakhit (2020) who stressed that "sometimes staff members at the centre could not find appropriate or

professional tutors for students with learning disabilities” (p.112) As explained by the findings of my study, one interviewed staff member stressed that there were only two staff members at the centre with a degree in special education while the rest were specialized in different subjects e.g., office management. However, it can be difficult for non-expert staff to identify level of need and suggest appropriate adjustments based on the needs of students with learning disabilities (Bakri, 2019). As stressed by a few interviewed faculty members there was no expert staff who could either identify students with learning disabilities or help faculty members to provide reasonable adjustments to those students. It can, thus be critical for disability centres/units to have expert staff in learning disabilities.

The study findings suggested that expert staff in learning disabilities could help disability centres/units identify students’ needs and provide students with learning disabilities with appropriate adjustments. Therefore, a lack of expertise could negatively impact the role of disability centres/units in effectively responding to the needs of those students.

5.2.5 RQ5: Policy of Reasonable Adjustments

Question five inquired about the participants’ perspectives regarding the policy of reasonable adjustments at their Saudi public universities. The findings of phase one identified mixed perspectives as 81% of staff members on their questionnaire agreed that they had a policy about reasonable adjustments at their universities, and 50% of faculty members on their questionnaire were not sure whether such a policy existed. Mixed perspectives were also reported in phase two, as a few faculty members and half of the staff members considered that a policy of

reasonable adjustments did exist, but most people concerned were not aware of it and application was, in turn, also limited. Half of the faculty members reported that a policy on reasonable adjustments for students with learning disabilities did not exist in their universities.

These conflicting views on the existence of a reasonable adjustments policy reflect broader issues concerning disability policy in Saudi higher education. For example, studies in Saudi literature, dating back to 2017, continue to advocate for a clear disability vision in Saudi higher education (Alwabli, 2017), particularly for students with learning disabilities (Hariri, 2020). This is because the Saudi Ministry of Education still does not have a clear policy plan for disability in higher education (Bakri, 2020) and this was also discussed by one interviewed faculty member in this study.

This may be because Saudi Arabia used to have two ministries of education, one for general education and one for higher education which both worked independently and oversaw separate educational systems. However, only the Ministry of General Education had a disability policy, known as the Saudi Arabian Regulations of Special Education Programmes and Institutes Policy (RSEPI). RSEPI is an educational policy comprised of 11 articles that defined disability concepts and categories and include information about services and transition plans (Alquraini, 2010). However, this policy (RESEPI) was limited to students aged 6 to 18, meaning that RESEPI did not cover students with disabilities in Saudi higher education.

Recently under the Saudi Vision 2030, the two ministries merged into one Ministry of Education which is responsible for education in Saudi Arabia from

preschool to higher education, however, RSEPI remains unchanged: resulting in the absence of a disability policy in higher education. This is consistent with the findings of the study (phase two) as half of the faculty members and one staff member at the disability centres/units reported that there was no policy in their universities regarding the provision of reasonable adjustments for students with learning disabilities. This was also in line with most recent Saudi studies (e.g., Hariri, 2020; Bakri, 2020) that explored the topic of students with learning disabilities in Saudi higher education which concluded that there was an absence of reasonable adjustments policy for this group of students. Thus, researchers (e.g., Hariri 2020; Abed & Shackelford, 2020) found that due to the lack of such a policy, students with learning disabilities were often seen as not eligible for reasonable adjustments at their universities.

As well as the absence of disability vision, the study findings (phase two) indicated that the absence or development of disability centres/units was another reason that could contribute to the absence of institutional policy related to the provision of reasonable adjustments. The literature supports that disability centres/units can have different roles including establishing an institutional policy on reasonable adjustments (Shaw & Dukes, 2006). However, as reported in the literature (Bakri, 2020) and found in this study (phase two), there were no disability centres/units in some universities and in others, those centres/units were still underdeveloped. Therefore, when these departments (i.e., disability centres/units) were absent or still under development, their roles and relevant institutional policy development could be limited. As stressed by one interviewed staff member there

was no policy that supported the provision of reasonable adjustments, as the disability centre was still underdeveloped.

Moreover, due to the lack of disability vision and policy in Saudi higher education as mentioned above, some public universities in Saudi Arabia started, via their disability centres/units, to establish their own disability policy to fill the gap in national policy. However, only a few public universities (e.g., King Saud university) in Saudi Arabia had a written and published disability policy during the time of writing, indicating that there was little progress made by universities in this regard (King Saud University, 2018). Some universities only had what was called a “Supporting Document” which is named in Arabic “الوثيقة الداعمة- *alwathiqat aldaema*” which they regarded as a policy (Arafah & Mohammed, 2015). For example, this type of document stated the student’s information, type of disability, and adjustments that were needed.

This may explain why some participants considered that a policy of reasonable adjustments existed in their Saudi public universities. However, as raised by the interviews, some of those universities who had a policy were facing challenges such as lack of application and awareness. As stressed by one staff member, a policy of reasonable adjustments did exist, but faculty members needed to consider the application of this policy. This shows how it is vital for faculty members to fully engage with the legislations and policies of their universities (Ryder & Norwich, 2019). In addition, some of the faculty members who confirmed the existence of a policy stressed that the disability centre/unit in their university did not provide enough awareness of this policy. This might be why 50% of faculty members in phase one

were not sure about the existence of reasonable adjustment policies at their universities. Therefore, as reported by the broader literature, it is critical for disability centres/units to ensure that disability legislation and the relevant university's policy have been implemented (Chiu et al., 2019).

Finally, participants in phase two of the study provided different recommendations to their respective Saudi public universities regarding how to develop a reasonable adjustment policy. For example, participants considered that universities may benefit from their expert faculty members in special education to help them develop their policies. As emphasised by participants the policy needed to be written by experts in disability – and not policymakers. Second, participants considered that the policy should clearly state the role of faculty members, the needs of students with learning disabilities and the type of available support, including reasonable adjustments. Also, participants stressed that the policy needed to be reasonable (e.g., based on university resources) and respect students' privacy.

The findings highlighted that policies of reasonable adjustments did exist in some Saudi public universities while they did not in others. Therefore, it becomes critical for disability centres/units in Saudi public universities to increase the effectiveness of their role by establishing and advocating for a reasonable adjustment policy to ensure that students with learning disabilities are provided with access to equal educational opportunities. Also, disability centres/units in Saudi public universities can use participants' recommendations to develop their own policies.

5.2.6 RQ6: Barriers and Facilitators toward the Provision of Reasonable Adjustments

Question six concerned participants' views on what they considered as facilitators and barriers towards the provision of reasonable adjustments at their Saudi public universities. The study found that there was a complex picture regarding facilitators and barriers to the provision of reasonable adjustment as factors were influencing each other. Next, I discussed some of those interrelated facilitators and barriers.

5.2.6.1 Barriers

Despite the availability of the provision of reasonable adjustments as discussed earlier, the data analysis (phase two) identified that different factors including the lack of diagnosis for students with learning disabilities, lack of clarity about the concept of learning disabilities and reasonable adjustments, misconceptions about students with learning disabilities and the provision of reasonable adjustments, lack of collaboration, and tension between equality and equity challenged the provision of reasonable adjustments.

5.2.6.2 Lack of Diagnosis

In phase two of the study, half of the participating staff members at disability centres/units raised that lack of official diagnosis was one of the biggest challenges, associated with the provision of reasonable adjustments at their Saudi public universities. Furthermore, the study found that the reasons for the lack of diagnosis were beyond students with learning disabilities and their universities e.g., due to parents and society.

Similar to the findings of the study, most recent studies conducted in the western regions of Saudi Arabia (e.g., Hariri, 2020) found that the lack of diagnosis had been reported as a challenge to students with learning disabilities in accessing the provision of reasonable adjustments. Also, in the middle/central region of Saudi Arabia, another study (Binbakhit, 2020) found that the absence of an official diagnosis limited the provision of reasonable adjustments to students with learning disabilities in their universities.

One of those studies, namely Binbakhit (2020), found that the lack of diagnosis may be due to the lack of policy implementation and more particularly of transition plans. Transition plans are crucial in preparing students with learning disabilities for adult life after school education such as navigating their way into higher education (Aldabas, 2015). The requirement to have a transition plan is emphasised by the Fifth Article of Regulations of Special Education Programs and Institutes of Saudi Arabia Policy (RSEPI), which states that all students with disabilities (including those with learning disabilities) should be provided with transition services as a part of their individual learning plan (ILPs) (Alquraini, 2013). The findings of this study were consistent with previous literature on the topic (Binbakhit, 2020) as it has been reported that students with learning disabilities rarely entered universities in Saudi Arabia with an Individual Learning Plan (ILP) even though RSEPI confirmed their right to have one before entering higher education (Ministry of Education, 2020).

Furthermore, this study found that a major challenge to implementing RSEPI in Saudi Arabia was the inadequate capacity and human resources of the Saudi

Ministry of Education. Specifically, 4 out of 20 participants in phase two of the study reported that the lack of resources made it difficult to provide an official diagnosis for students with learning disabilities. As explained by the interview, not all public schools in Saudi Arabia had support programs (e.g., resource rooms) for students with learning disabilities and even those programs did not exist in all stages of Saudi general education, resulting in a lack of diagnosis for many students with learning disabilities. Similar findings were reported by Poch et al. (2023) who claimed that in Saudi Arabia, “related services are available but not always in the same school the student is attending” (p.3) which challenges the implementation of RSEPI. Also, the findings of phase two reported that the number of learning disabilities teachers compared to students with learning disabilities was considered small; this is consistent with Aldabas (2015) who claimed capacity with regards to assessment tools and experts in diagnosis was still limited in Saudi Arabia.

The lack of implementation of RSEPI and limited resources (e.g., experts in diagnosis) (Aldabas, 2015) in Saudi general education has likely also led to the absence of an official diagnosis for students with learning disabilities when entering Saudi higher education. As explored in phase two, disability centres/units faced the challenge that a student could not be identified as having a learning disability unless there was an official diagnosis. More specifically, as found in this study, many of the students with learning disabilities who came to the disability centre assumed they had learning disabilities but only a small number had an official diagnosis. This led the disability centres/units to look for resources (e.g., diagnosis centres) outside of their universities to provide diagnoses to students with possible undiagnosed

learning disabilities, but the problem was that most centres were either private (i.e., paid services) or did not provide services for individuals who were over 18 years old.

The findings suggested that official diagnosis could be a great challenge in Saudi general and higher education due to the lack of internal and external resources. For example, schools may have limited access to assessments and expert people for diagnosis (internal resources) and universities limited access to expertise for diagnosis outside their academic institutions (external resources). This was thus expected to limit the access of students with learning disabilities to the services and needed support in both education systems.

5.2.6.3 *Misconceptions*

Misconceptions about students with learning disabilities and reasonable adjustments were found as another challenge to the provision of reasonable adjustments. As mentioned by some of the participants in phase two, there were two assumptions among faculty members that challenged the provision of reasonable adjustments. One was that students with learning disabilities appeared 'normal' (e.g., have no visible disabilities) and the second, reasonable adjustments were just a means of 'help' offered to students with learning disabilities.

The assumption that students with learning disabilities were often perceived to be just like those students without a disability was heavily reported within the Saudi (Binbakhit, 2020) and international literature (Wolanin and Steele, 2004). For example, a study conducted in the western region of Saudi Arabia found that students with learning disabilities encountered significant resistance from faculty members due to their disbelief in learning disabilities, thus students found convincing

faculty members of the existence of learning disabilities a pointless battle (Abed & Shackelford 2020).

The literature has reported different reasons for the assumption of 'normality' or non-existence of learning disabilities. For example, one reason for this assumption could be associated to a long-held debate (the dyslexia debate) with more radical views questioning the very existence of this particular disability (Rice & Brooks, 2004; Elliott, 2020). Another reason for this debate was the invisibility of learning disabilities (Wolanin and Steele, 2004). The latter reason seemed to be more consistent with the findings of the study as some faculty members in phase two mentioned that students with learning disabilities looked 'normal' (like other students without learning disabilities). This may be due to how Saudi society visualizes disability. As claimed by Alsharif (2019) people in Saudi Arabia tend to see individuals with disabilities as 'sick' people who need to be cured. It can be argued that since faculty members didn't see any signs of 'sickness', the assumption made was that those students just looked normal (don't have a disability).

Moreover, as Saudi society considers disability a sickness, people tend to show great sympathy for individuals with disabilities (Alsharif, 2019). As raised during the interviews by some of the staff members at disability centres/units 'reasonable adjustments' were sometimes misconstrued as a means of 'help' to show sympathy to people with disabilities. Thus, the faculty's assumption (in this study) that reasonable adjustments were just a way of 'help' could be related to how society viewed their disability (Alsharif, 2019). This view is inconsistent with learning disabilities' nature as an invisible disability (Wolanin and Steele, 2004). Therefore,

some faculty members (as found in the study) refused to offer the provision of reasonable adjustments (or sympathy, as they defined it) to those who did not appear to have a visible disability. Second, this view which assumes that people with disabilities need sympathy, led many people with disabilities to feel pitied and unable to participate effectively and productively in their society (Saudi Authority of People with Disabilities, 2021). Therefore, this can emphasise the importance of defining reasonable adjustments as a means of minor changes to enable access and support the presentation of information and demonstration of knowledge (Conderman et al., 2017; Beech, 2010), not as a means of help as found in the study. This is because how society understands disability as negative views could lead to misassumptions resulting in limited access to the provision of reasonable adjustments as found in the study. The next point explains some of the faculty assumptions about equality and equity of the provision of reasonable adjustments.

5.2.6.4 Tensions between equality and equity

Alongside faculty's assumptions about students with learning disabilities and reasonable adjustments, the study found that faculty's perceptions about equality and equity intersected with the faculty's decisions on the provision of reasonable adjustments. As raised in the interviews, some participants stressed that some faculty members refused the provision of reasonable adjustments just to be equal in treating their students; and believed that reasonable adjustments should be provided to all students because all students should be treated equally. However, a small number of participants argued that students with learning disabilities needed equity (to be treated according to their needs), not equality (see Chapter 4 section 4.2.5.1.3).

Tensions between equality and equity are widely discussed in the literature (Ryder & Norwich, 2019) as one assumption is that despite students' disabilities/needs all students should be treated equally in, for example, assessments, exam conditions, expectations etc. (e.g., see Lam, 1995; Murillo & Hidalgo, 2017). So, this assumption considers that it is only fair when treating all students equally which is consistent with the argument made by some of the participants' faculty members in this study. This is also in line with a similar study conducted in Saudi Arabia on the same topic with one of the interviewed faculty members for that study said to a student with learning disabilities, "I cannot help you because your classmates will feel I treat you differently" (Binbakhit, 2020, p.111). Thus, some faculty members may refuse the provision of reasonable adjustments to ensure equality for their students (Binbakhit, 2020).

Another perspective though is that it is not fair to treat students 'equally' using the same teaching, learning, and assessment methods without considering their needs and individual differences. Thus, some studies argue that it is necessary to take action to guarantee equitable opportunities among students (Sandoval et al., 2021) by considering the individual differences among students (Bakri, 2019); this is equity. This argument was raised by some of the interviewed faculty and staff members as due to the nature of learning disabilities e.g., difficulties in reading and writing, students with learning disabilities required different adjustments such as extra time to get an equal opportunity with their peers, not a higher or a lower chance.

To the best of my knowledge, within the Saudi literature there is still not much is written about the concept of equity, however, the broader literature supports that

students with learning disabilities might find it difficult to access and present information using traditional teaching and testing methods (Weis et al., 2016). As a result, to meet their specific needs, students with learning disabilities can require a variety of adjustments in teaching and learning methods, tailored to their needs (Trimmis & Bessas, 2016; Heiman & Precel, 2003), so they can have equitable not equal educational opportunities as those without learning disabilities.

As discussed, the tension between equality and equity is ongoing, however, as raised by the findings of the study such tensions can prohibit the provision of reasonable adjustments. Therefore, it can be suggested that considering faculty's assumptions and clarifying the needs of students with learning disabilities in terms of the provision of reasonable adjustments, may help in navigating some of the tensions regarding equality and equity. In turn, this may increase the availability of the provision of reasonable adjustments.

5.2.6.5 Facilitators

The study suggests that facilitating reasonable adjustments for students with learning disabilities in Saudi public universities is a complex issue involving various interconnected factors, including recognition of learning disabilities as a disability category in the Saudi higher education system, the discourse of disability, establishing more disabilities centres/units, and increasing students with learning disabilities' awareness of the available support.

5.2.6.6 Disability recognition

The recognition of learning disabilities as a disability category in the Saudi higher education system was mostly raised during the interview. 5 out of 15

interviewed faculty and staff members at disability centres/units' raised that learning disabilities were not listed as a disability category by Saudi public universities which led to injustices for this disability group e.g., delayed university entry and services. Thus, participants described the absence of disability recognition as the main issue faced by students with learning disabilities when attending Saudi public universities.

Despite the lack of research on the topic of students with learning disabilities in Saudi higher education, studies (e.g., Abed and Shackelford, 2020; Alwabli, 2017) have reported that learning disabilities is a neglected disability in Saudi higher education. As found in the literature, learning disabilities are an ambiguous disability category in Saudi higher education (Binbakhit, 2020). As confirmed by the findings of the study, one reason that led to neglect of learning disabilities as a disability category was the lack of relevant policy supporting the access of students with learning disabilities into the Saudi higher education system. As raised in the interviews, the main issue was that during the registration process, students with learning disabilities registered as students without a disability because this disability category was still not recognized by some Saudi public universities. So, the absence of the recognition of learning disabilities as a disability group led to injustices for this group, e.g., limited access to support services. This is consistent with the arguments made by Abed and Shackelford (2020) that Saudi higher education overlooked students with learning disabilities who might not be able to receive appropriate educational support (including reasonable adjustments).

Another reason that challenges the recognition of learning disabilities as a disability category in Saudi higher education is the negative view of this disability

group. As raised in the interviews, there was an assumption that students with learning disabilities were not capable of studying in higher education. As explained by one student with learning disabilities, they were seen as incapable of studying psychology even though they had met all entry requirements. Also, during informal communication with a disability centre in a Saudi public university, I was given the response that students with learning disabilities could only be found in schools, not in higher education. This is consistent with Alwabli (2017) who claims that there are low expectations and limited representation of learning disabilities in Saudi higher education. For example, statistically, according to the Saudi General Authority, in 2017 there were 175,391 students with disabilities in higher education including students with the following: visual and hearing impairment, communication and understanding disorders, memory and concentration problems, and physical disabilities, without a specific mention of learning disabilities (Binbakhit, 2020).

The findings highlight that recognizing learning disabilities as a disability category in Saudi higher education and considering societal attitudes towards such disabilities is crucial to facilitate the provision of reasonable adjustments to these students. Therefore, increasing awareness among educators and the public about the capabilities of students with learning disabilities may help in creating a more inclusive educational environment.

5.2.6.7 The disclosure of disability

As well as disability recognition, six out of fifteen interviewed faculty and staff members felt that students with learning disabilities must disclose their disability to be able to be provided with the required support. However, as raised in the

interviews, several factors prohibited students with learning disabilities from disclosing their disability, such as the fear of losing a seat in university, parents refusing the stigma of disability, and negative attitudes by society.

Lack of self-identification (non-disclosure of a disability) is a global issue that hinders students with learning disabilities benefiting from available services (Beauchamp-Pryor 2013; Venville et al., 2013). The literature has reported that students with learning disabilities may avoid self-identification to prove their self-sufficiency, avoid labelling, and to resist integrating disability into their university student identity (Marshak et al., 2010). However, since the provision of reasonable adjustments is based on the disclosure of the disability, reasonable adjustments will only be made if the individual discloses a disability (Ineson & Morris, 2006). Consequently, the disclosure of the disability is essential to access reasonable adjustments (Ineson & Morris, 2006).

Similar to the broader literature, the study findings reported that students with learning disabilities may avoid disclosure to avoid the stigma of disability and resist seeing it as part of their university student identity. The findings of the study added other reasons that could prevent students with learning disabilities from disclosing their disabilities such as parents, broader society, and fear of losing acceptance into university. For example, as stressed by a few interviewed staff members, some students with learning disabilities had the assumption that the disclosure of the disability might affect their enrolment to university in general or to a specific major even though all the information was kept confidential. However, as confirmed by one of the interviewed students with learning disabilities, they were not able to enter their

wanted program due to their disability as discussed above (see Disability Recognition). This also was confirmed by Bakri (2019), who stated that some courses were still deemed unsuitable for students with learning disabilities, and many students were turned down.

This may not be based on discrimination against people with disabilities because the Saudi Basic Law of Governance prohibits discrimination on any basis, including disability as stated in Article 26 (Unified National Platform, 2023). However, this may be due to the lack of university disclosure policy and societal assumptions about disability that can be associated with sympathy and people with disabilities might be seen as incapable for learning. For example, as discussed above, many Saudi institutions, particularly civil society organizations, often treat people with disabilities with compassion as their guiding principle rather than equality of opportunity (Saudi Authority of People with Disabilities, 2021). Therefore, when entering university, some students with learning disabilities may avoid self-identification due to their fear of losing acceptance at university. This emphasises the importance of universities ensuring that students with learning disabilities are treated based on Saudi law that prohibits discrimination and not societal assumptions and beliefs. Also, universities must consider increasing awareness of Saudi law among students with learning disabilities as well as developing their disclosure policy.

Additionally, the interview raised that family (e.g., parents) could have a role in the disclosure of disability. It was stressed that some students were asked by their parents not to disclose their disability at the university because of the stigma of

disability could bring. Also, a small number of participants (2) discussed that students with learning disabilities may hide their disabilities because they were afraid of society's view of disabilities. One participant particularly recommended that there was a need to increase awareness of disability disclosure in Saudi society.

The findings highlighted that Saudi higher education students may avoid self-disclosure not only due to the fear of stigmatization but also due to the fear of losing acceptance into university and negative views about the disability by parents and society. Therefore, universities, society, and policymakers must address the challenges of disability disclosure in their universities to increase access of their students with learning disabilities to needed support.

5.2.6.8 Increased Awareness of the Available Support

As well as disability recognition and disclosure, this study found that increasing awareness of students' rights and the existence of disability centres could facilitate the provision of reasonable adjustments. As raised by 3 out of the 5 interviewed students with learning disabilities, they were not aware of the support until they were connected (e.g., by faculty members) to the disability centre in their universities. Also, one faculty member supported the fact that students with learning disabilities did not know about their rights in the provision of reasonable adjustments. Similarly to the findings of the study, within the international (Fossey et al., 2017) and Saudi literature (Abed & Shackelford, 2020) it has been reported that there can often be a lack of awareness among students with learning disabilities in terms of requesting and accessing reasonable adjustments during their studies.

One possible reason for this lack of awareness of students' rights, as discussed by Fossey et al. (2017), is the absence of self-advocacy among students with learning disabilities. As emphasised in the same study, higher education is more about students' independence, so students with learning disabilities as independent adults (independent learners) are encouraged to advocate themselves about the available support. However, based on the findings of this study (phase two), it can be argued that since most students with learning disabilities in Saudi Arabia enter higher education without a transition plan (so, with no prior knowledge of disability-related needs and required support) it can be difficult for students with learning disabilities to advocate for themselves.

One faculty member commented that even though they refused to provide reasonable adjustments to one student with a learning disability, the student did not advocate for their rights. As they emphasised, if students knew their rights about reasonable adjustments, they would likely advocate for them. Therefore, due to the ineffectiveness of the transition plan in Saudi Arabia, self-advocacy may not be effective in this case. It can be critical for students with learning disabilities to have an effective transition plan in Saudi Arabia to be able to advocate for their rights in the provision of reasonable adjustments (Fossey et al., 2017).

Another issue is the lack of awareness of the existence of disability centres/units. Similar to the existing literature (e.g., Bakri, 2019; Binbakhit, 2020) a small number of interviewed participants felt the disability centres/units in their universities were 'hidden'. For example, one interviewed student with learning disabilities mentioned that it took them a year to know about the existence of the

centre which delayed access to the provision of reasonable adjustments. This issue was also raised by another student with learning disabilities who confirmed that they did not know about the centre until the fourth term of their studies.

One Saudi public university in their disability policy stressed that increasing the awareness of students with learning disabilities about the existence of disability centres/units is the responsibility of faculty members (King Saud University, 2018). However, as found in the study (in phase one) about half of the faculty members (45%) were not sure about the existence of disability centres/units at their universities. Also, in (phase two) one faculty member claimed that their university does not provide awareness of the existence of disability centres/units.

The findings highlighted that to increase the awareness of students with learning disabilities about the existence of disability centres/units, it was critical first to consider faculty members' awareness of disability centres/units at their universities. Arguably, it can be said that unless faculty members are aware of the existence of the disability centres/units and the services they provide, they will, in turn, not be able to promote awareness of disability centres/units to their students with learning disabilities.

5.2.6.9 Creating more Disability Centres/Units

The provision of reasonable adjustments in higher education is often facilitated through disability centres or units (e.g., see Lipka et al., 2020). This approach is widely used (e., in the UK, USA, and Saudi Arabia) to ensure that students with disabilities, including those with learning disabilities, have access to equitable educational opportunities (Almasoud, 2019). Therefore, the presence of

disability centres or units can play a crucial role in providing reasonable adjustments, as highlighted in Chapter Two (e.g., see section 2.1.6.1). However, despite the findings of this study and similar studies in Saudi Arabia (e.g., Bakri, 2019), disability centres or units are still not available in all Saudi public universities. According to 4 out of 8 faculty members interviewed for this study, their universities lacked a disability centre or unit. This finding was further supported by a survey conducted by the Saudi Authority of People with Disabilities, which revealed that not all 29 Saudi public universities had a disability centre or unit (some universities did not respond to their questionnaire – but were included in my study). Therefore, it can be argued that the establishment of more disability centres or units is crucial to ensuring the availability of reasonable adjustments, particularly since this provision depends on the existence of these centres and units.

However, thinking more broadly, the idea of supporting students with disabilities through disability centres/units, that involves focusing on “individuality”, has received criticism. One critique is that it implies ideas associated with the medical model, which places emphasis on limitations within the individual (Almasoud, 2019). Some also argue that recognising individual needs and differences and using labels to ensure the required support or services can stigmatise students (Grimes, 2020; Florian & Murdoch, 2021; Florian & Spratt, 2013). As part of this approach, students are required to disclose their disabilities (e.g., voluntarily) to access the required supports, such as the provision of reasonable adjustments. However, despite the criticism this way of supporting students faces, there are some advantages. For example, recognising the needs and individual characteristics of students with disabilities may help understand the nature of their

disabilities and the support they need (Almasoud, 2019; Hendry et al., 2022), especially those with hidden or invisible disabilities, like learning disabilities. This is also a widely used way of providing students with disabilities with support in higher education worldwide (e.g., see Cortiella & Horowitz, 2014; Barazandeh, 2005; Timmerman & Mulvihill, 2015).

Still, it is important to note that there are other ways of supporting students with disabilities, as stated in Chapter Two of this study (see Section 2.1.2.1), such as the Universal Design of Learning (ULD). This approach, as discussed in Chapter Two, emphasizes "commonality" as it focuses on meeting the needs of all students in the classroom with less need for individualized adjustments, that is the approach used by disability centres/units (Stentiford and Koutsouris, 2021). UDL involves three principles, engagement, representation, action and expression, and aims to provide students with multiple means of expression, representation, and engagement in knowledge (CAST, 2018). Yet this approach is still criticised in terms of its practical limitations e.g., in terms of the extent to which it can support a wide range of students needs at the same time (Norwich, 2013).

Both approaches to inclusion, "commonality" and "individuality," reflect ongoing tensions regarding how to approach students' differences (Stentiford and Koutsouris, 2021). This tension is part of broader inclusion debates, and more particularly the *dilemma of difference* (Norwich 2007, 2013). The *dilemma of difference* describes a tension between a desire to support the individual needs of students but do so in ways that are not stigmatising (Norwich, 2013). The concern is that, if difference is not recognised, then students might not have their needs met

and this is evident in how students with learning disabilities were often overlooked as it was found in this study. Therefore, from the beginning of this thesis (see Chapter Two, Section 2.1.2.1), this study recognized, and explained both approaches to supporting students with learning disabilities and acknowledged that there is no single way to understand and achieve inclusion. Whilst valuing ULD and other approaches emphasising commonality, this study recognized that the use of disability centres/units as a way of supporting students with disabilities is still common in policy and practice, especially in countries where inclusion is in early stages – this includes Saudi Arabia (Alqahtani, 2021). Therefore, it can be argued that it is important to explore reasonable adjustments in countries like the UK, the USA and Saudi Arabia where this is a widely used approach designed to safeguard students' with learning disabilities access to higher education.

To conclude, for now, the establishment of more disability centres/units can help foster the development of needed disability policy and the recognition of learning disabilities as a disability group, which can facilitate the provision of reasonable adjustments in Saudi public universities (Abdulrahman & Ayad 2012), especially in Saudi Arabia where many public universities are still navigating their way to inclusive education. However, this does not ignore the fact that there are different and more recent approaches to inclusive pedagogy that may help respond to students' needs without stigmatizing and labelling (e.g., see Stentiford and Koutsouris, 2021). Therefore, Saudi public universities can develop their capacity and resources (e.g., as found in the study – RQ4) as well as keep an eye on the most recent inclusive pedagogy which can help them navigate their way to more

inclusive education soon. The next section presented the research findings considering the study's theoretical background.

5.3 Section Two: Discussion of the Findings Considering the Theoretical Background.

This section explains the study findings considering different levels/systems of Bronfenbrenner Ecological Systems. Based on the ecological theory, the access of students with learning disabilities to the provision of reasonable adjustments (at the centre of the model) can be influenced by different factors which are internal and external to them (see Chapter 2, Section 2.2.1). Therefore, the findings of the study were presented and explained according to each level/system as shown in the Figure 5.1 and Table 5.1.

Figure 5. 1: Ecological Systems Theory (EST) Adapted for this Study.

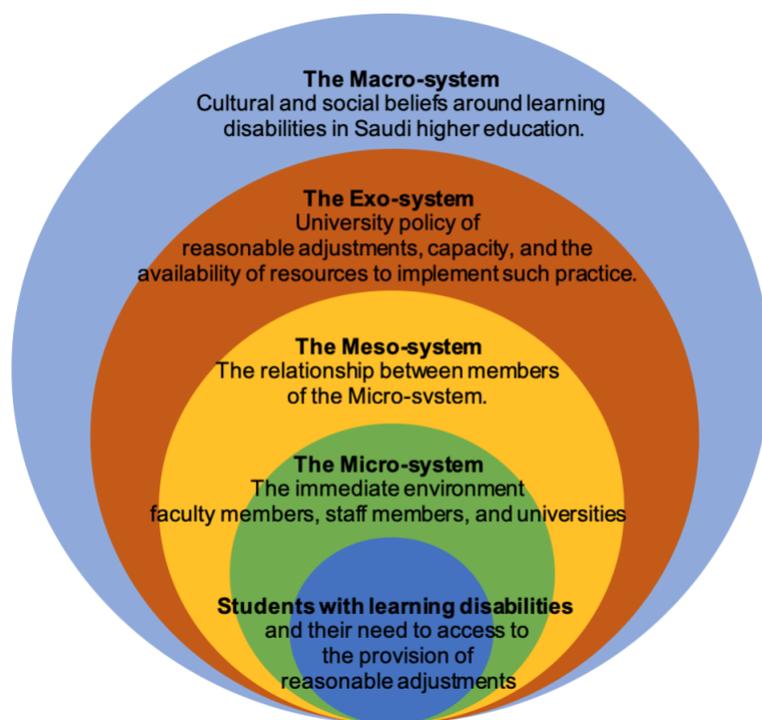


Table 5. 1: Summarizes the study findings considering Bronfenbrenner Ecological System.

The centre of the model			
Students with learning disabilities and their need to access the provision of reasonable adjustments			
Lack of self-advocacy and self-identification.			
Level One: Micro-system			
Factors that exist within the immediate environment of the learner e.g., students with learning disabilities			
Some Saudi public universities did not recognise the existence of students with learning disabilities as a disability group	Most faculty members were not familiar with the concept of reasonable adjustments. Tensions between equality and equity.	Different meanings of practices existed among a few participant staff members and faculty members.	A few faculty members hold different beliefs and assumptions about students with learning disabilities and the practice
Level Two: Meso-system			
Relationships and connections between factors sitting within the Micro-system			
Absence of establishment of disability centres/units. Lack of providing students with a way to disclose their disability.	Lack of awareness about the existence of disability centres/units, the presence of students with learning disabilities, policy, and availability of support.	Concerns about disability policy application. Absence of disability centres/units in creating policy.	Disability centres/units not provided with enough development programs by their universities.
Level three: Exo-system			
Influencers that are not directly embedded within the individual's immediate environment e.g., policy and resources.			
The policy of reasonable adjustments did not exist in some Saudi public universities.	Lack of staff at disability centres/units, especially. Lack of expert staff in learning disabilities (human resources).	Lack of informational resources e.g., training for both staff members and faculty members.	Disability centres/units reported the need for more funds.
Level four: Macro-system			
Influencers that exist outside of the immediate environment but still influence the inner system e.g., social cultural changes			
The absence of disability policy and vision in Saudi higher education. Lack of Saudi Ministry of education's resources and capacity	The view of people with disabilities as people in need of sympathy. Lack of application of transition plan	The view of students with learning disabilities as incapable learners.	The assumption that the establishment of disability centres/units were not a priority.
Level five: Chronosystem			
Changes in systems across time			
Lack of official diagnosis.	Changes made by the Saudi government influence the education system.	e.g., Saudi public universities required to have their independent system and financial resources.	The introduction of Saudi Vision 2030.

5.3.1 Level One: Micro-system

The Micro-system includes all factors that exist within the immediate environment of the learner (Bronfenbrenner, 1994) such as the school, teacher, and non-teaching staff (Anderson et al., 2014). At this level the study found that some Saudi public universities (as the immediate learning environment of students with learning disabilities) did not recognise this disability group leading to injustices, such as delayed university entry and limited access to support services. As found in the study, this omission may be due to the negative societal assumptions of students with learning disabilities at the Macro-system as “incapable learners”. Therefore, this group of students was overlooked in their immediate environment e.g., by some Saudi public universities (Abed and Shackelford, 2020; Alwabli, 2017) resulting in limited access to available support (Harir, 2020). It is critical for Saudi public universities to officially admit the existence of students with learning disabilities, for this group of students to access appropriate support.

In addition, the study found that most faculty members were unfamiliar with the concept of reasonable adjustments, and some defined them in different ways, such as a way of helping. Lack of clarity about the concept of reasonable adjustments is recognised internationally, as evidenced by studies conducted in Spain (Sandoval et al., 2021), England (Kendall, 2018), and Saudi Arabia (in this study). However, defining reasonable adjustments as a way of helping in this study reflected how Saudi society at the Macro-system viewed people with disability e.g., people in need of sympathy (Alsharif, 2019). Therefore, the study argued that the societal view of disability at the Macro-system influenced how people defined reasonable adjustment at the Micro-system. Moreover, societal views not only influenced defined practices

at this level but also whether/how to offer reasonable adjustments. As found in the study, some faculty members refused to offer reasonable adjustments (e.g., to show sympathy based on their definition) to those students who didn't seem to have a visible disability – out of a principle of equality (i.e., treating all students the same). Therefore, it is critical to educate people at the Micro-system about the concept of reasonable adjustments as well as consider or challenge their social and cultural ideas of disability at the Macro-system. This is because ideas at the Macro-system can influence how people define and offer practices at the Micro-system (Arishi, 2020; Boyle et al., 2013).

5.3.2 Level Two: Meso-system

The Meso-system symbolizes the dynamic relationship between factors sitting within the Micro-system e.g., faculty members, staff members, and their universities (Anderson et al., 2014). These factors, as explained by Anderson et al. (2014), are not isolated from one another, rather there is a dynamic relationship with one another influencing the centre of the model (the learner). At this level, it has been found that not all Saudi public universities have disability centres/units and not all officially recognise the existence of students with learning disabilities in their learning environment, resulting in difficulties implementing the provision of reasonable adjustments. This is inconsistent with the role of universities in coordinating support in higher education e.g., through establishing disability centres/units and supporting equal access to all university services to students with learning disabilities on par with those without disabilities (Abdulrahman & Ayad 2012). Therefore, as reported by the study findings, the lack of disability centres/units

and disability recognition limited the access of students with learning disabilities to the provision of reasonable adjustments at the centre of the model (see RQ6).

In addition, faculty members and disability centres/units have responsibilities in the provision of reasonable adjustments. Disability centres/units are responsible for developing policies and providing information on disability policy and procedures (Shaw & Dukes, 2006), but, as found in phase one, 50% of faculty members were not sure about the existence of reasonable adjustments policy at their universities and in phase two some faculty members claimed that disability centres/units in their university did not provide enough awareness of this policy. Also, disability centres/units are responsible for educating faculty members and their staff about disabilities and adjustments and providing training for the staff members at the disability centres/units (Shaw & Dukes, 2006). However, in phase one the majority of faculty members (92.7%) had no training either on offering disability-related additional support and in phase two some confirmed that. However, in phase two some staff members claimed this may be due to limited training opportunities for staff members inside and outside of their universities.

Faculty members also are expected to play a role in the provision of reasonable adjustments by accepting adjustments stated by the centres/units (King Saud University, 2018). According to phase one findings, 48.7% of staff members in the phase one questionnaire agreed that faculty members accepted the adjustments stated by the disability centre/unit; however, interviewees raised a few issues in phase two. Some staff members, for example, expressed concerns that some faculty did not understand the importance of services and reasonable adjustments. In

addition, one staff member stated that faculty members should think about how to apply reasonable adjustment policies, meaning that they must apply policy; not considering it as something they could refuse to implement. However, some interviewed faculty argued that the disability centre/unit in their university did not provide enough awareness of this policy. This could highlight how the relationship between factors at the Micro-system of Saudi public universities was complicated, however, it simultaneously emphasises the importance of developing a strong and collaborative relationship between these factors which seems not yet fully realised.

5.3.3 Level Three: Exo-system

The third level includes factors such as school policies and allocated resources that are not directly present in an individual's immediate learning environment but can still impact the overall learning experience (Anderson et al., 2014). On one hand, the study findings at this level indicated that some Saudi public universities did not have a reasonable adjustment policy and some universities lacked awareness and application of the policy. The lack of policy existence or awareness and application resulted in no or limited availability of reasonable adjustments based on 'personal diligence' rather than existing policy, as supported by the findings of this study. Therefore, it can be argued that issues related to policy influenced the learning experience of students with learning disabilities at the centre, i.e., access to the provision of reasonable adjustments.

On the other hand, the study findings showed that the allocated resources in Saudi public universities (e.g., human, financial, and informational resources) to guide the provision of reasonable adjustments were either not existent or

inadequate. As discussed under (RQ4), the necessary capacity (i.e., disability centre/units) to offer reasonable adjustments was not available in all Saudi public universities. Meaning that the responsible department for implementing the provision of reasonable adjustments, as participants (4) reported, was absent in their universities. Moreover, informational resources, such as training for both faculty and staff members at disability centres/units were reported as limited resulting in difficulties implementing the provision of reasonable adjustments (Binbakhit, 2020; Little & Gimblett, 2023). Hence, as suggested by the study findings, Saudi public universities could develop courses that focus on disability and reasonable adjustments for their staff members at disability centres/units (Arafah & Mohammed, 2015; Alwabli & Binomran, 2018) and faculty members (Trimmis & Bessas, 2016; Lipka & Shecter-Lerner, 2020).

In addition, most interviewed staff members reported that there was a need for more finances to assist in the expansion of services and meeting the needs of students with disabilities (see Chapter 4, Section 4.3.7.3). It is important to highlight here that Saudi Arabia encouraged universities to establish their own financial resources as part of Vision 2030. It may become critical for disability centres/units to secure their own financial resources in order to increase the availability of inclusive practices such as the provision of reasonable adjustments (Morris, 2006). Moreover, as one role of disability centres/units is to identify a suitable adjustment for students with learning disabilities (Chiu et al., 2019; Shaw & Dukes, 2006), they need expert staff to effectively deal with their responsibilities. However, as supported by the study findings (see RQ4), the number of staff members, especially experts in learning disabilities were inadequate resulting in difficulties in meeting the needs of students

with learning disabilities e.g., through the provision of reasonable adjustments. Therefore, Saudi public universities should consider their resources, capacity, and policy which can determine the range of provision at their universities.

5.3.4 Level Four: Macro-system

This system represents the influences that exist outside of the learner's physical environment but still influence the inner system (Anderson et al., 2014). At this level, the study discovered that the social, cultural, and political context in which Saudi public universities operated had an impact on their inner system as well as on students with learning disabilities (as learners) at the centre of the model. On the one hand, the study found that Saudi social and cultural views on disability at the Macro-system influenced (mainly negatively) how universities operated in the Micro-system. As the study found, the conceptualisation of the term reasonable adjustments as a way of offering help (and sympathy) to students with learning disabilities reflects how Saudi society views people with disabilities as needing sympathy (Alsharif, 2019). This way of viewing reasonable adjustments as a way of showing sympathy led some faculty members to withhold the provision of reasonable adjustment from those who did not seem to have a visible disability (students with learning disabilities) affecting those students at the centre of the model. Arguably, Saudi society's perception of people with disabilities as needing sympathy in the Macro-system shaped the faculty's understanding of the provision of reasonable adjustments and the way they provided this provision in the Micro-system. As a result, this affected the access of students with learning disabilities to the provision of reasonable adjustments at the centre of the model.

Moreover, despite the official recognition of students with learning disabilities in Saudi general education as a disability group e.g., from 1995 (Battal, 2016), this disability group is still not fully recognised by all Saudi public universities, as evidenced by my study and similar studies (e.g., Abed and Shackelford, 2020). As found in my study, one factor that may have contributed to this omission is the cultural perception of students with learning disabilities as “incapable learners”. The view was also reflected by similar studies within the Saudi context (e.g., Bakri 2019) as that students with learning disabilities were denied access to some departments in universities as seen as not capable learners. Therefore, the societal and cultural perception of disability influenced not only practices but also the recognition of students with learning disabilities as a disability group in the Micro-system.

On the other hand, the study found limitations in resources, staff capacity, and policy of the Saudi Ministry of Education at the Exo-system that influenced the inner system of Saudi public universities. For example, as supported by the study findings and the literature, there is an absence of disability policy (Bakri, 2019) and vision (Alwabli, 2017) in Saudi higher education. The lack of the Saudi Ministry of Education disability policy for higher education at the Macro-system, as found in the study, influenced the existence of reasonable adjustments at the Meso-system (see RQ4). As a result, the provision of reasonable adjustments was limited in some universities and was provided based on 'personal diligence' in others. Second, the lack of resources and staff capacity e.g., experts in diagnosis (Aldabas, 2015), lack of special education teachers, and special education programs (Poch et al., 2023) in general education influenced how universities operated. As supported by the study findings and similar studies (e.g., Binbakhit, 2020), disability centres required official

diagnoses for reasonable adjustments, but many students entered higher education without.

Therefore, the Saudi Ministry of Education's limited resources and capacity in general education, the lack of identification and diagnosis posed challenges for disability centers/units dealing with students with learning disabilities who did not have an official diagnosis, according to this study. As a result, students with learning disabilities at the centre of the model faced difficulties accessing the provision of reasonable adjustments. Consequently, the Saudi Ministry of Education (at the Macro-level) must expend its resources and capacity so universities via disability centres/units can provide reasonable adjustments more effectively and increase students' access to the provision of reasonable adjustments.

5.3.5 Level Five: Chronosystem

The chrono-system considers the passage of time and its impact or influence on the learner, such as years of primary or secondary school education (Anderson et al., 2014, p.30). This level was not a focus of the study questions, however, findings revealed that the passage of time influenced other systems especially e.g., the Exo-system as well as students with learning disabilities at the centre of the model. In Saudi Arabia, the higher education system has experienced a few major changes in the last few years. For example, under Saudi Vision 2030 universities became responsible for generating their own financial resources, as a result of which the Saudi Ministry of Education's allocated funds for universities have not increased significantly in recent years (Ministry of Education, 2022). As supported by study findings (Phase Two, Section 4.3.7.3), funds were insufficient, necessitating the

need for more funds to enable disability centres/units to perform their functions, such as recruiting staff, particularly expert staff, and developing courses for staff and faculty members. Therefore, this historical shift had a direct impact on the Exo-system, such as allocated financial resources.

Second, as found in the study the passage of time had a direct influence on students with learning disabilities at the centre of the model. For example, the lack of an official diagnosis was one of the biggest challenges in providing reasonable adjustments at Saudi public universities, as confirmed by the interviewees of this study. The reason for this was that not all public schools provided special education services, such as resource rooms (Poch et al., 2023). As confirmed by the findings of the study, services for students with learning disabilities were mostly limited to elementary school (due to limited resources, as previously discussed). Therefore, as students with learning disabilities progressed through the educational system, they had a lower chance of receiving official assistance such as an official diagnosis due to limited special education programs (Poch et al., 2023). Arguably, it can be said that the passage of time affected their chances of being diagnosed and identified which later affected their access to the provision of reasonable adjustments in higher education. Therefore, the Saudi Ministry of Education must expand its capacity and resources in all phases of education and by extension assist universities in meeting the needs of students with learning disabilities, such as access to services.

5.3.6 Critical Reflections on the Ecological System

The Ecological Systems highlights how different levels/systems influenced each other and students at the centre of the model (Anderson et al., 2014), but to the best of my knowledge, this theory did not incorporate ideas about individual

(learner) agency at the centre of the model. This is probably because inclusion is more focused on children (Hockings, 2010) not adults, and as a result the child is perceived as one who can be affected, not make an effect. However, as this study focused on adult learners, it can be argued that adults as active independent learners within their immediate environment can be affected and make an effect.

One way to explore the effect students with learning disabilities can have on their development is through their interaction within their immediate environment, particularly through self-disclosure and self-advocacy. Students with learning disabilities are expected to disclose their disability to people at the Micro-system e.g., university faculty and staff members at disability centres/units so they can access the required support (Ineson & Morris, 2006; Marshak et al., 2010). However, as found in the study, it was difficult for students with learning disabilities to disclose their disability. As discussed under the Micro-system, students with learning disabilities were not officially recognised as a disability group by all Saudi public universities, therefore, those students faced difficulties in disclosing their disability within their immediate environment which, as a result, failed to admit their existence. Second, as found at the Macro-system, there was a lack of disability policy published by the Saudi Ministry of Education that highlighted all disability groups, thus some disability such as students with learning disabilities were overlooked by their universities' policies at the Exo-system. Third, as found in the Macro-system, there are cultural assumptions which consider students with learning disabilities as “incapable learners”. As a result, some students with learning disabilities avoided self-identification due to the fear of losing acceptance to university (Norwich, 2013; Grue, 2016). Therefore, factors within the Micro-system, the Exo-system, and the

Macro-system negatively influenced the role of those students in their interaction with their immediate environment e.g., through self-disclosure.

On the other hand, self-advocacy is another role students with learning disabilities need to have as independent learners (Fossey et al., 2017). However, as found in the study, participating students with learning disabilities were not aware of such a skill due to the lack of awareness of their right to reasonable adjustments in the first place. As found in the study, many students with learning disabilities entered higher education without a transition plan (so, with no prior knowledge of disability-related needs and required support). Therefore, it could be difficult for students with learning disabilities to advocate for themselves without a transition plan. There was a need to consider the effectiveness of the transition plan policy (in the Macro-system) so students with learning disabilities could play their role through self-advocacy in their immediate environment (e.g., in the Micro-system).

5.4 Summary of the Chapter

The chapter highlighted and discussed most of the key findings identified in this study. It can be argued that as universities are the formal educational environment for students with learning disabilities, it is critical for Saudi public universities to officially recognize this disability category in their education systems. Second, holding different understandings of the term reasonable adjustments e.g., help, adaptations, and modifications may lead to assumptions that can limit the provision of reasonable adjustments resulting in limited access to educational opportunities for those students. Therefore, it is critical to ensure that faculty and staff members at disability centres/units share a common understanding of the

concept of reasonable adjustments to avoid different interpretations which can lead to different meanings.

Besides, the interest of faculty members in the provision of reasonable adjustments is not the only element in the provision of reasonable adjustments, instead, their assumptions and beliefs can interact with their interest in such provision. Therefore, it is critical at the first stage to consider what are their beliefs and assumptions of the provision of reasonable adjustments as well as students with learning disabilities. Furthermore, factors sitting outside of the immediate environment of students with learning disabilities are important to be considered. For example, limitations in policy, human resources, financial resources, and informational resources can hinder the implementation of the provision of reasonable adjustments resulting in a gap between what students require, what the faculty is inclined to do, and what could be provided in reality.

Thus, to enhance the provision of reasonable adjustments to students with learning disabilities and ensure access to educational provision for this disability group, the conceptualization of reasonable adjustments, policies, resources, and assumptions must be considered. The next chapter presents the study's contribution and limitations as well as offers recommendations to enhance the provision of reasonable adjustments to students with learning disabilities in Saudi public universities.

Chapter Six: Conclusion and Recommendations

This final chapter presents the study's contribution to theory, policy and practice. The chapter also discusses the strengths and limitations of the study as well as recommendations for future research.

6.1 Significance and Contribution of the Study

The study has made valuable and significant contributions to the topic. It is the first study in Saudi Arabia to include both male and female faculty and staff members at disability centres/units regarding exploring the provision of reasonable adjustments for students with learning disabilities at Saudi public universities in a single study. Additionally, it is the first study to involve participants (faculty and staff members at disability centres/units) from different regions of Saudi Arabia (e.g., north, south, middle/central/ east, and west Saudi public universities). Furthermore, this study is the first to survey both male and female staff members at disability centres/units, unlike previous studies that mostly relied only on interviews. Lastly, this study is the first to use a mixed-method design to explore the provision of reasonable adjustments to students with learning disabilities at Saudi public universities.

Moreover, this is the first study to look into the obstacles and facilitators of making reasonable adjustments for students with learning disabilities in Saudi public universities. The findings show that, the provision for reasonable adjustments for students with learning disabilities at Saudi public universities was challenged by different factors. These factors were reflected in participants' conceptions of reasonable adjustments, university capacity, resources, and policy, as well as Saudi

cultural and societal assumptions about learning disabilities and the provision of reasonable adjustments. Therefore, the study identified and addressed current gaps in the literature, making significant contributions to knowledge, and more particularly to theory, policy and practice.

6.1.1 Contribution to Knowledge

It has been argued that the majority of studies on learning disability have been conducted in the United States, Australia and the United Kingdom (e.g., under dyslexia), implying a need to study learning disabilities in different contexts (Moria, 2022) to develop a more inclusive higher education (Collins et al., 2019; Couzens et al., 2015; Barkas et al., 2020). According to the findings of this study, students with learning disabilities in Saudi higher education faced similar challenges to those reported in the wider literature, such as lack of disclosure of disability (Kendall, 2016), the stigma of disability (Marshak et al., 2010), and a lack of training and knowledge on how to support students with learning disabilities e.g., through the provision of reasonable adjustment (Lipka & Shecter-Lerner, 2020). However, the study added to the body of knowledge in that Saudi students with learning disabilities also faced unique challenges in their particular context. These challenges included understandings of reasonable adjustments within their universities, and (mostly negative) cultural views about disability more broadly and learning disabilities in particular. These perspectives, as explained later (e.g., see Section 6.1.2), not only shaped people's understandings of reasonable adjustments, but also affected the educational opportunities of these students. As a result, the study argued that implementing different practices (including the provision of reasonable adjustments)

to improve inclusivity, without considering how disability is perceived in its own cultural context, may pose challenges to their implementation.

Regarding the Saudi context, despite limited research on the topic, there is evidence that the provision of reasonable adjustments to students with learning disabilities is poor (e.g., Alalyani, 2021, Alkhashrami, 2008; Althuwabi 2009; Arafah, & Mohammed, 2015; Alwabli & Binomran, 2018; Abed & Shackelford, 2020; Binbakhit 2020; Hariri 2020). Yet, to date, no study has explored in depth why the provision of reasonable adjustments is still limited when it comes to students with learning disabilities in Saudi higher education institutions. The current study found that the concept of reasonable adjustments was understood differently by different stakeholders (staff with different roles, and faculty members) thus affecting the provision of reasonable adjustments (Binbakhit, 2020; Bakri, 2019). Despite the faculty's interest in providing reasonable adjustments, there was a lack of disability centres/units, funding, training, and expertise to implement such a practice. Additionally, not all Saudi public universities recognized students with learning disabilities as a disability group which denied them access to required support. This highlighted the urgent need to fully acknowledge the existence of students with learning disabilities at Saudi public universities and build the necessary knowledge, capacity, and resources to facilitate the provision of reasonable adjustments in Saudi higher education. By doing so, students with learning disabilities at Saudi public universities can have a better chance of accessing the support they require.

6.1.2 Contribution to Theory

Bronfenbrenner's ecological systems theory (Bronfenbrenner, 1994) provided a more holistic picture of how different factors from different levels/systems could influence each other and influence students with learning disabilities at the centre of the model. Theoretically, the broader cultural, political, and social factors at the macro-systems (which were external to the immediate environment of students with learning disabilities) have shaped their inner education system (Saudi higher education). For example, this is the first study that explained how social and cultural views of disability at the Macro-system shaped people's (faculty and staff) understanding of the provision of reasonable adjustments at the Micro-system. Saudi society's perceptions of people with disabilities, who are often seen as objects of sympathy (Saudi Authority of People with Disabilities, 2021), shaped their thinking about the provision of reasonable adjustments that were described in the study as a way of 'helping'.

This definition, as claimed by the interviewees, reflected how some faculty members as members of society (at the Macro-system) thought of people with disabilities as people in need of sympathy and for this reason, they could be provided with reasonable adjustments. So reasonable adjustments were not provided based on ideas about social justice in education, responding to the students' diverse needs, but instead based on social-cultural perspectives on disability as a deficit. This, however, is not the goal of inclusive education which aims to eliminate barriers (Arishi, 2020), respond to the diverse needs of students (Vitello & Mithaug, 1998; Ainscow, 2005) and ensure accessibility for all (Hockings, 2010).

Viewing the provision of reasonable adjustments by people in the Micro-system as a way of showing sympathy to students with disabilities was not consistent with the nature of learning disabilities as an invisible disability (Wolanin and Steele, 2004). Therefore, the question became whether reasonable adjustments could be offered (or sympathy to be shown) to those who seemed not to have a visible disability. As argued by the interviewees, some faculty members considered students with learning disabilities as 'normal' students (with no visible disability), thus some refused the provision of reasonable adjustments out of a principle of equality. Therefore, the way Saudi society in the macro-system perceived people with disability did not only influence the way they defined practice in the Micro-system, but also their decisions in providing support at this level. This highlights how it can be important to consider how society views people with disabilities (Saudi Authority of People with Disabilities, 2021) and how this might impact the educational system.

Furthermore, the study found that Saudi society's perception of people with disabilities (in the Macro-system) shaped not only practices but also the recognition of students with learning disabilities as a disability group in their immediate environment (in the Micro-system). Despite the fact that students with learning disabilities were first recognised as a disability category in Saudi general education in 1995 (Battal, 2016), this disability group is still not fully recognised by all Saudi public universities, according to the study and similar studies findings (e.g., Abed and Shackelford, 2020). One reason for this omission, according to the study, was that students with learning disabilities were often seen as 'incapable' learners. According to one interviewee, admission into Saudi higher education reflects in some cases sociocultural assumptions and not equal opportunities (Saudi Authority of

People with Disabilities, 2021). As reported by interviewees, some students with learning disabilities were denied access to some departments, such as psychology, due to their disability, as they were seen as 'incapable' of studying there. As a result, some students with learning disabilities avoided disability disclosure due to their fear of losing acceptance into university as found in the study. This may not be due to the lack of government policy related to discrimination (e.g., see Saudi Basic Law of Governance), but due to the lack of university disclosure policy and to the view of Saudi society of disability which often assumes that people with disabilities are unable to handle their personal affairs (Saudi Authority of People with Disabilities, 2021). Therefore, it can be argued that the idea of 'incapability' at the Macro-system influenced the recognition of this disability category at the Micro-system.

Nevertheless, the cultural assumption at the Macro-system may also be blamed for the delay in the establishment of disability centres/units at Saudi public universities in the Meso-system. For example, under the Saudi disability code 2000, universities must meet the educational needs of students with disabilities including those with learning disabilities, and one way to do so is to establish disability centres/units to assist in the implementation of reasonable adjustment policies and practices at their institutions (Chiu et al., 2019). However, as found in the study, some Saudi public universities still had no disability centers/units resulting in difficulties in providing students with learning disabilities with needed support. One reason for that was that these centres/units were not seen as a priority by higher education institutions e.g., universities. Therefore, perceptions of disability in Saudi society have shaped the education system in Saudi Arabia hence, Saudi society needs to shift thinking and emphasize equal opportunities for all.

In summary, the use of Bronfenbrenner's ecological systems theory (Bronfenbrenner, 1994) allowed for an in-depth understanding of the study and showed the connection between different factors in and out of students' immediate environment. It also explained how those factors could influence each other which consequently influenced students with learning disabilities at the centre of the system. Therefore, theoretically, the study provided a wider picture of the inclusion of students with learning disabilities in Saudi public universities and made a valuable contribution to knowledge on this topic.

6.1.3 Contribution to Policy

Previous studies confirmed the availability (Bakri, 2019; Arafah & Mohammed, 2015) and unavailability (Hariri, 2020; Abed and Shackelford, 2020) of reasonable adjustment policies at Saudi public universities, which was reaffirmed by this study as well. However, the study added to the current state of policy knowledge by emphasizing the role of the Ministry of Education and disability centres/units in this regard. First, the study found that the absence of a disability policy in Saudi higher education (Bakri, 2019) might influenced the existence of the reasonable adjustments policy at Saudi public universities. At the time of writing, universities did not have guidance and a clear vision by the Saudi Ministry of Education regarding disability, which would cover identification and provision for different disability groups. Therefore, there is a need for a disability policy produced by the Saudi Minister of Education regarding higher education (Hariri, 2020) so universities can develop their institutional policies upon that policy. This is needed to avoid some disability groups, including learning disabilities, being overlooked or neglected as found in this and similar studies (e.g., Abed and Shackelford, 2020).

Additionally, the study made an important contribution to knowledge by emphasizing the role of disability centres/units in policy, which has not yet been fully developed in Saudi public universities. According to the literature, disability centres/units are responsible for providing information on disability policy and procedures (e.g., raising awareness) as well as establishing disability policy when there is none (Chiu et al., 2019; Shaw & Dukes, 2006). However, the study discovered that disability centres/units were not available or underdeveloped in some Saudi public universities, resulting in a lack of awareness and local institutional policy. As a result, it is critical for Saudi public universities to encourage the establishment of disability centres/units on their campuses. Also, the existing disability centres/units needed to increase the effectiveness of their role by establishing and advocating for a reasonable adjustment policy to ensure that students with learning disabilities were provided with access to equal educational opportunities.

6.1.4 Contribution to Practice

This study made important contributions to practice concerning the inclusion of students with learning disabilities in the higher education context. More particularly, this is the first study that investigated faculty knowledge of the concept of reasonable adjustments within the Saudi context, as recommended by previous studies (Alalyani, 2021; Bakri, 2019). As already discussed (see Section 6.1.2), ideas such as the 'normality' of students with learning disabilities and defining reasonable adjustments as a way of helping to show 'sympathy' were dominating participants' views about both concepts. Practically, as supported by the study findings, the above ideas interacted with faculty's decisions in the provision of

reasonable adjustments as discussed above. Therefore, from a practical point of view, Saudi public universities should consider educating faculty and staff members at disability centres/units about learning disabilities and reasonable adjustments. First, there is a need to develop and share a common understanding that providing reasonable adjustments is not a form of assistance to show 'sympathy'; rather, it is adaptations made to curriculum and assessment (Conderman et al., 2017; Gregg, 2012) to enable students with learning (and other) disabilities to access and demonstrate knowledge. Second, faculty members need to be aware of the nature of learning disabilities as invisible disability and avoid linking practice to social and cultural assumptions. Instead, they should consider practices as a form of eliminating barriers to learning (Arishi, 2020) and ensuring accessibility for all (Hockings, 2010).

Additionally, several Saudi studies (e.g., Arafah & Mohammed, 2015; Alwabri & Binomran, 2018) mentioned that non-academic staff members at Saudi public universities needed more disability-related training to be able to work with students with learning disabilities. As supported by the literature, staff members via their disability centres/units are responsible for educating faculty members about the provision of reasonable adjustments (Shaw & Dukes, 2006) as well as identifying suitable adjustments for students with learning disabilities (King Saud University, 2018). Therefore, it can be argued that developing the necessary knowledge of the provision of reasonable adjustments through training is critical for staff members at disability centres/units. However, to the best of my knowledge, no study has explained why staff members experienced limited training opportunities. The study found this was because courses on disability and reasonable adjustments for staff members at disability centres/units inside and outside Saudi public universities were

limited, especially, courses relating to how to adapt the curriculum for students with learning disabilities. As found in the study, most of the available training inside universities was offered to faculty members (as claimed by the interviewees, faculty members mostly needed it) while available training outside of universities e.g., paid courses mostly were not related to disability and the provision of reasonable adjustments. Therefore, the study recommends that it would be valuable for staff members at disability centres/units to be provided with more training opportunities (by their universities) to develop the needed knowledge regarding working with students with learning disabilities.

Third, despite the importance for universities to establish disability centres/units to prompt the provision of reasonable adjustments at their universities (Abdulrahman & Ayad 2012; Chiu et al., 2019; Shaw & Dukes, 2006), the current study identified that not all Saudi public universities had established disability centres/units to support their students and co-ordinate the provision of reasonable adjustments. Therefore, in some Saudi public universities, there was no responsible department to organise the provision of reasonable adjustments, resulting in difficulties implementing such a practice. Thus, as recommend by this study more disability centres/units are needed to ensure that all students with learning disabilities have equitable opportunities of accessing academic support e.g., the provision of reasonable adjustments.

Lastly, despite the need for students with learning disabilities to access the provision of reasonable adjustments, this study and similar studies (Bakri, 2019) reported that students with learning disabilities may not be aware of available support, resulting in limited access. The study also added to the existing knowledge

that there is not only a lack of awareness of available support, but there is also a lack of self-advocacy, fear of disability disclosure (e.g., from students and their parents), lack of application of transition plans, and lack of awareness of the existence of disability centres/units; which all contributed to limited access. Therefore, from a practical point of view, the study recommends that there is a need to educate students with learning disabilities about self-advocacy, increasing awareness (e.g., through courses) about the need for self-disclosure of disability, and increase awareness of the existence of disability centres/units which can help improve access to the provision of reasonable adjustments.

6.2 Study Implications and Recommendations

The contributions made by the study as well as its key findings could be valuable for different stakeholders such as policymakers, Saudi universities, Saudi society etc. as summarised below.

Table 6. 1: The study key findings, implications, and recommendations.

Sectors	Key Findings	Implications	Recommendations
Policymakers	Absence of disability vision and policy in higher education.	Lack of reasonable adjustments policy in some public universities.	Establish a disability vision and policy for higher education.
Ministry of Education	Limited resource e.g., teachers, resource rooms, assessments tools, and experts in diagnosis. The provision of reasonable adjustments to students with learning disabilities was limited to some Saudi regions e.g., middle, and west universities.	Lack of disability diagnosis, identification, and transition plan for students with learning disabilities. Lack of the provision of reasonable adjustments in other Saudi regions such north, south, and east.	Increase availability of recourse e.g., teachers and assessment tools to increase access to services. Ensuring the provision in available across all Saudi region to allow for equal educational opportunities.
Universities	Unfamiliarity as well as different understandings of the concept of reasonable adjustments.	Different understandings led to different interpretations of the concept e.g., way of help.	Educate faculty and staff about the concept of reasonable adjustments and provide a shared meaning which can lead to common understanding.

Table 6.1 Continued

Sectors	Key Findings	Implications	Recommendations
Universities	Lack of reasonable adjustments policy.	Lack of the provision of reasonable adjustments.	Establish a reasonable adjustments policy to increase access to the provision of reasonable adjustments.
	Limited recourse e.g., human, informational, funds required to implement the provision of reasonable adjustments.	Limited resources challenged the implementation of the provision of reasonable adjustments.	Increase availability of resources required to effectively implement the provision of reasonable adjustments.
	Limited training opportunities for staff members inside and outside of their universities.	Difficulties dealing with the needs for students with learning disabilities, especially in how to adapt the curriculum.	Create courses for staff members related to disability and the provision of reasonable adjustments.
	Lack of recognition of learning disabilities as a disability group by some universities	Students with learning disabilities were not included in the provision of reasonable adjustments.	Officially recognise students with learning disabilities as a disability group.
Disability centres/units	Lack of awareness and establishment of policy.	Lack of application of existing policy and absence of reasonable adjustments policy in some Saudi public universities.	Increase the effectiveness of the role of disability centres/units in creating policy and increasing awareness.
	Lack of awareness of available support.		
	Lack of awareness of the existence of disability centres/units.	Students and faculty not aware of disability centres/units and available support.	Increase awareness of the existence of disability centres/units and available support.
Society	Negative views about disability and students with learning disabilities	Lack of shared understanding of practices, access to the provision, and educational opportunities.	Shift thinking from people needing sympathy to equal opportunities and capable learners.
Students	Lack of awareness of legal rights	Fear of disability disclosure.	Increase awareness of legal rights of people with disabilities perhaps can increase disability disclosure.
		Students with disabilities not empowered and voices not heard.	Self-advocacy training
		Disability stigma.	
Parents	Asked their children not to disclose their disability.	Limited their children access to the provision of reasonable adjustments.	Parents need to broaden their understanding of learning disabilities and advocate for disclosure of disability.

6.2.1 Policymakers

Saudi Arabia's Vision 2030 encourages universities to develop their own systems and secure resources for a sustainable education system (Bureau of Experts at the Council of Ministers, 2023). However, it appears that disability in

higher education is not currently a part of this initiative (Hariri, 2020). According to this study and similar studies (Bakri, 2019), Saudi higher education institutions must have a clear disability vision that is guided by a written policy. The absence of such a policy as claimed by the interviews has led to a lack of reasonable adjustments for students with learning disabilities. Therefore, as we 'in Saudi Arabia' strive for a more sustainable education system, it is crucial to prioritize inclusivity by developing a clear disability vision and policy in Saudi higher education. Therefore, the Saudi public universities, being responsible for disability provision, must work with policymakers at the Saudi Ministry of Education and the government to create a comprehensive plan for disability in higher education, which can promote inclusivity and accessibility for all students.

6.2.2 Saudi Ministry of Education

According to the study, the lack of diagnosis and identification of students with learning disabilities (Aldabas, 2015) was caused by a lack of special education teachers and programmes that supported those students in general education (Poch et al., 2023). To fill this gap, some disability centres/units became responsible for the diagnosis and identification services as claimed in the study. Therefore, it is critical for the Saudi Ministry of Education to expand its capacity and resources in general education and by extension assist universities in meeting the needs of students with learning disabilities, such as access to services. Second, studies have long advocated for more readily available support for students with learning disabilities (e.g., Althuwabi 2009); however, as this study found, the provision of reasonable adjustments to students with learning disabilities was still limited to specific regions, such as the middle and western regions of Saudi Arabia. As a result, the Saudi

Ministry of Education must ensure that reasonable adjustments are available across all Saudi regions so that students with learning disabilities in all Saudi regions have equal educational opportunities.

6.2.3 Saudi Public Universities

As Saudi public universities are the immediate environment in which students with learning disabilities learn and participate, the study found that there is much room for improvement. For starters, universities must fully acknowledge the existence of students with learning disabilities as a disability group in their educational system so that those students are not overlooked. Second, universities must develop the necessary capacity, such as disability centres/units, and resources (policies, human, informational e.g., training, and financial resources) to make their inclusion practices more visible and effective. This could be accomplished by, for example, establishing more disability centres/units, developing relevant policies, allocating more resources to the development of disability-related training programmes, or collaborating with external organisations to provide more training opportunities for faculty and staff.

Third, considering Saudi Vision 2030, which requires universities to secure their own financial resources, Saudi public universities, through disability centres/units, must seek external financial resources to provide students with learning disabilities with the necessary support. Thus, the findings of the study emphasise that it is important to speed up those educational transformations in the country. In not doing so, this would likely lead to a gap between the Saudi vision and reality. In addition, universities must educate their own faculty members interested

in the provision of reasonable adjustments, by clarifying to them that reasonable adjustments do not mean help or unequal treatment. Moreover, it is important for universities to consider the perspectives of their faculty and staff when implementing their inclusion practices by highlighting differences between equality and equity in treatment. This can be accomplished by developing a new course or advocating for more training opportunities (e.g., through their partnerships) that focus on the provision of reasonable adjustments.

Finally, as found in the study, students with learning disabilities may not be aware of their rights due to the lack of application of transition plans as well as a lack of awareness of available support by disability centres/units. Therefore, as well as the need for the Saudi Ministry of Education to expand its capacity and resources e.g., by providing transition plans, universities need to empower students with learning disabilities by providing them with self-advocacy training so students can be encouraged to ask about and make use of the available support.

6.2.4 Disability Centres and Units

As supported by the literature, disability centres/units have varying responsibilities in the provision of reasonable adjustments, such as raising awareness of existing policies and developing new policies where none exist (Chiu et al., 2019; Shaw & Dukes, 2006). However, the study found that some disability centres/units may continue to fail to carry out their responsibilities effectively, resulting in a lack of awareness of existing policy and the absence of policy in some universities. As a result, the study recommends that disability centres/units increase the effectiveness of their role by raising awareness of existing policy and advocating

for policy development where none exists. The study also found that disability centres/units should raise awareness of their existence and the support available to students with learning disabilities. As supported by the study findings, there was a lack of awareness of the existence of disability centres/units and available services, including the provision of reasonable adjustments.

6.2.5 Students, Parents, and Society

This study identified that disclosure of learning disability in Saudi higher education was a complex issue where universities, policymakers, parents, society, and students themselves may have a role. For example, some universities did not have a disability disclosure policy, students avoided disclosure due to the fear of losing admission in their programme of choice, parents reinforced the stigma of disability, and society saw students with learning disabilities as 'incapable' learners. This emphasised that not only the lack of relevant policy but also cultural beliefs surrounding students with learning disabilities in Saudi Arabia influenced disability disclosure in Saudi higher education. Therefore, there is a need to address those challenges in Saudi Arabia by e.g., developing policies and increasing awareness of learning disabilities and disability disclosure.

6.3 Limitations of the Study

Despite the significance of the study's findings and valuable contribution to knowledge made by the study, there are limitations that must be acknowledged. One is that due to lack of statistical and public data about the number of disability centres/units in Saudi public universities and register of students with learning disabilities, only female students with learning disabilities were interviewed.

However, to the best of my knowledge and available information, all located disability centres/unit units only included female students who were officially registered and diagnosed as students with learning disabilities. Also, the number of participants in disability centres/units in phase one may be considered as small (44 staff) due to limited information about the actual and total number of staff members at disability centres/units in Saudi public universities. However, based on available information, participating staff in phase one represented half the number of available staff members at the time of the study (see Chapter 3, Table 3.3).

6.4 Future Research

Given the study's limitations, future research may consider including male students with learning disabilities if applicable to further explore their view of the provision of reasonable adjustments at Saudi public universities. Also, as the study found that most of the available students with learning disabilities at the time of the study were females, it is worth exploring issues that may prohibit male students with learning disabilities from disability diagnosis and disclosure. In addition, in view of the findings of the study, different studies can be recommended. Given that one of the study's main findings revealed that reasonable adjustment policies existed in some Saudi public universities but not in others due to a lack of disability-related vision and policy in Saudi higher education, it would be critical to conduct a study exploring disability vision and policy in Saudi higher education considering the Saudi Vision 2030. This can be done by interviewing policymakers at the Saudi Ministry of Education and universities to learn about their perspectives on disability policy. Furthermore, because reasonable adjustments were limited to specific regions, it would be interesting to investigate how Saudi public universities envisage inclusive

education or practices at their institutions. Finally, the study discovered that not all universities recognised learning disabilities as a disability in their educational system. It would be worthwhile to explore the ways to improve disability recognition in Saudi higher education. By researching some of these key issues, researchers can highlight the importance of educating students with learning disabilities in Saudi higher education, as well as the need for and importance of developing a disability vision and policy in this educational sector.

6.5 Conclusion

The study concluded that reasonable adjustments were available in some Saudi public universities (middle and western universities) and limited in others e.g., southern, northern, and eastern universities, resulting in unequal educational opportunities. Second, despite faculty interest in the provision of reasonable adjustments to students with learning disabilities at Saudi public universities, their interests interacted with their broader cultural assumptions such as the concept of learning disabilities 'normality' and reasonable adjustments 'sympathy' resulting in ongoing tensions.

Third, even though the study findings emphasised the need for the recognition and disclosure of learning disabilities, it was difficult to exist within Saudi higher education due to educational, political, social, and cultural challenges. Therefore, there is a need for adequate capacity e.g., disability centres/units and resources such as funds, staff, expert staff in learning disabilities and training for both staff and faculty members as well as existing and effective educational policies. Lastly and

importantly, Saudi society needs to rethink people with disabilities as capable learners who deserve equal opportunities, not sympathy.

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Appendixes

Appendix One: Ethical Approval from the University of Exeter



Research Ethics Committee Review Outcome

Dear Mohammed Altumayhi

Ethics Application ID: 492072

Title: Exploring Facilitators and Barriers Toward the Provision of Reasonable Adjustments to Students with Learning Disabilities in Saudi Public Universities.

Proposed Project Duration: 1 Nov 2021 - 22 Mar 2024

Your research study ethics application submitted above on 8 Oct 2021, 13:09 has been reviewed by the College of Social Sciences and International Studies Ethics Committee.

Outcome decision by Research Ethics committee: Approved

Dear Mohammed

Your ethics proposal has been approved.

Best wishes for your research

Regards

Mark Slater

Research Ethics Officer

Decision Date: 28 Oct 2021, 11:46*

You can only start your research once you have received an **Approved outcome.*

The start date of your research will be no sooner than the Ethics Committee

Approval decision date above.

Research Ethics Committee Approval End Date: 22 Mar 2024

Regards,

College of Social Sciences and International Studies Ethics Committee

Appendix Two: Ethical Approvals from Saudi Public Universities

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فاكس +966 11 4678697

المملكة العربية السعودية
ص.ب. الرياض 2454 11451
www.ksu.edu.sa



عمادة البحث العلمي

Ref No: KSU-HE-21-769

حفظه الله

سعادة الباحث/ محمد حسن عبده الطمحي

السلام عليكم ورحمة الله وبركاته

إشارة إلى توصية اللجنة الفرعية لأخلاقيات البحوث الإنسانية والاجتماعية في جلستها الرابعة عشرة

بتاريخ ٢٥/٠٤/١٤٤٣هـ، الموافق ٣٠/١١/٢٠٢١م.

نفيد سعادتكم بموافقة اللجنة الدائمة لأخلاقيات البحث العلمي على إجراء البحث الموضح بالجدول الآتي:

م	الاسم	عنوان البحث	الأداة	الحالة
١	محمد حسن عبده الطمحي	تعرف على الميسرات والمعوقات أمام توفير التعديلات المعقولة للطلاب والطالبات ذوي صعوبات التعلم في الجامعات السعودية الحكومية	استبانتين مقابلة	الموافقة

وعليه نأمل من الجهات المعنية بالجامعة تسهيل مهمة الباحث.

وتفضلوا بقبول وافر الاحترام

عميد البحث العلمي

نائب رئيس اللجنة الدائمة لأخلاقيات البحث العلمي

أ.د محمد بن إبراهيم الوابل



- صورة إلى سكرتير اللجنة الدائمة لأخلاقيات البحث العلمي

٤/٦٧/١٢٠٨٢٦

١٤٤٣/٠٥/٠٣

Kingdom of Saudi Arabia
Ministry of Education
Princess Nourah bint
Abdulrahman University
(048)



المملكة العربية السعودية
وزارة التعليم
جامعة الأميرة
نورة بنت عبدالرحمن
(٠٤٨)

Graduate Studies and Scientific
Research Vice- Rectorate

وكالة الجامعة للدراسات العليا
والبحث العلمي

IRB Registration Number with KACST, KSA: HAP-01-R-059

December 23, 2021

IRB Log Number: 21-0497E

Project Title: 'Exploring Facilitators and Barriers Toward the Provision of Reasonable Adjustments to Students with Learning Disabilities in Saudi Public Universities.'

Category of Approval: EXEMPT

NOTE: 'Please send your research ethics certificate within 2 weeks.'

Dear Mohammed Hassan Altumayhi and Dr. George Koutsouris,

Thank you for submitting your proposal to the PNU Institutional Review Board. Your proposal was evaluated considering the national regulations that govern the protection of human subjects. The IRB has determined that your proposed project poses no more than minimal risk to the participants. Therefore, your proposal has been deemed **EXEMPT** from IRB review. Please note that this approval is from the research ethics perspective only. You will still need to get permission from the head of the department in PNU or an external institution to commence data collection.

Please note that the research must be conducted according to the proposal submitted to the PNU IRB. If changes to the approved protocol occur, a revised protocol must be reviewed and approved by the IRB before implementation. For **any** proposed changes in your research protocol, please submit a Request for Modification form to the PNU IRB. Please be aware that changes to the research protocol may prevent the research from qualifying for exempt review and require submission of a new IRB application or other materials to the PNU IRB. In addition, if an unexpected situation or adverse event happens during your investigation, please notify the PNU IRB as soon as possible. If notified, we will ask for a complete explanation of the event and your response.

Please be advised that regulations require that you submit a progress report on your research every 6 months. Please refer to the protocol number denoted above in all communication or correspondence related to your application and this approval. You are also required to submit any manuscript resulting from this research for approval by IRB before submission to journals for publication.

The researcher is personally liable for plagiarism and any violations of intellectual property rights.

IRB is not responsible for accuracy of statements on religious and cultural affairs so researchers must consult competent authorities.

For statistical services you are advised to contact the Data Clinic at the Health Sciences Research Center (hsr-DC@pnu.edu.sa) or the Scientific Research Center at the Deanship of Scientific Research (dsr-rsc@pnu.edu.sa) extension 30711.

We wish you well as you proceed with the study. Should you have additional questions or require clarification of the contents of this letter, please contact me.

You can apply for research funding at (DSR-RS@pnu.edu.sa).

Sincerely Yours,

Prof. Omar H. Kasule Sr.

Chairman, Institutional Review Board (IRB)
Princess Nourah bin Abdulrahman University, Riyadh, KSA

Tel: +966 548867916

E-mail: irb@pnu.edu.sa; ohkasule@pnu.edu.sa



23 DEC 2021

الرقم: التاريخ: / / المشهورات:

Appendix Three: Faculty Members and Staff Members' Information Sheet Phase One

Study Title: Exploring Facilitators and Barriers Toward the Provision of Reasonable Adjustments to Students with Learning Disabilities in Saudi Public Universities.

Researcher name: Mohammed Hassan A Altumayhi

Invitation and summary:

First, I would like to thank you for considering taking part in this study. This research project seeks to explore facilitators and barriers toward the provision of reasonable adjustments to Students with Learning Disabilities (LD) in Saudi Public Universities. Please take time to consider the following information carefully and discuss it (if you wish) with your colleagues or friends. Please, if you want to know more about this research project, feel free to contact me [The researcher: Mohammed Altumayhi], or my supervisor [Koutsouris, George]. Contacts details can be found at the end of this sheet.

Purpose of the research:

The Kingdom of Saudi Arabia is aiming to include students with Learning Disabilities (LD) in all levels of education in any of its processes; one of these is through the provision of reasonable adjustments. According to Disability Services Policies and Procedures at King Saud University reasonable adjustments are "any modifications in programs, policies, or practices that allow students with disabilities to perform in the program or have an outlet for rights and benefits as regular students, as well as benefit from all programs and activities provided that such arrangements do not impose a costly or necessary burden on the university" (King Saud University, 2013, p.13). This project aims to explore factors (e.g., barriers and facilitators) that influence provision of reasonable adjustments to students with LD in Saudi public universities. Achieving this goal will help in understanding barriers and facilitators that influence the provision of reasonable adjustments. Which in turn, could help in improving the provision of these adjustments to students with LD in Saudi universities.

Why have I been approached and what would taking part involve?

Faculty members and staff members at disability centers/units are considered an important aspect of the academic success of students with LD in higher education. And thus understanding their knowledge of Learning Disabilities and reasonable adjustments, as well as facilitators/barriers to the provision of reasonable adjustments, is critical to achieving the desired level of the provision of reasonable adjustments.

This study involves a questionnaire (phase 1) and interviews (phase 2). As a faculty member or a staff member at disability centers/units, you can participate in both phases (if you wish). As a participant, in phase 1 (the questionnaire) you will be asked to provide some background information such as age group, years of experience, level of education. Also, you will be questions about your knowledge and understanding of learning disabilities and reasonable adjustments as well as facilitators/barriers to the provision of reasonable adjustments. In phase 2 (the interview) you will be asked to provide more details about some of your answers in phase 1. For example, this may include questions about your feelings, beliefs, and attitudes to the provision of reasonable adjustments. Your participation will be greatly appreciated.

What are the possible benefits and disadvantages of taking part?

There are no benefits or disadvantages of participating in the study for either faculty members or CDSSs/Units staff members. However, I hope the results of this study could be used by the Ministry of

Education or Saudi universities to improve the provision of reasonable adjustments to students with LD in Saudi universities.

What will happen to the results of this study?

The results of this study will be used to fulfil the requirements of my Ph.D. degree, participate in conference presentations, and publish journal articles. However, all the results of this research will be published in an anonymized form.

What will happen if I don't want to carry on with the study and how will my information be kept confidential?

Participation in this study is completely voluntary, and participants can withdraw from the study at any time.

The digital recording of your interview will be deleted as soon as there is a written transcript of your interview, which will be held following the Data Protection Act. The information you provide will be used for research purposes and your data will be processed following data protection legislation and will be treated in the strictest confidence and will not be disclosed to any unauthorized third parties.

In addition, the University of Exeter processes personal data for the purposes of carrying out research in the public interest. The University will endeavour to be transparent about its processing of your data and this information sheet should provide a clear explanation of this. If you do have any queries about the University's processing of your data that cannot be resolved by the research team, further information may be obtained from the University's Data Protection Officer by emailing dataprotection@exeter.ac.uk or at www.exeter.ac.uk/data-protection.

Further information and contact details

Please feel free to contact me or my supervisor if you have any question about this study.

The researcher: Mohammed Hassan Altumayhi
Graduate school of Education
University of Exeter, St. Luke's Campus.
Heavitree Road, Exeter EX1 2LU
Email: ma808@exeter.ac.uk

First supervisor: Koutsouris, George
Graduate school of Education
University of Exeter, St. Luke's Campus.
Heavitree Road, Exeter EX1 2LU
Email: G.Koutsouris@exeter.ac.uk

Thank you for your interest in this project

Appendix Four: Faculty Members and Staff Members' Consent Form Phase One

Study Title: Exploring Facilitators and Barriers Toward the Provision of Reasonable Adjustments to Students with Learning Disabilities in Saudi Public Universities.

General Information

Dear faculty member and staff members at disability centres/units, the purpose of this research project is to explore facilitators and barriers toward the provision of reasonable adjustments to students with LD in Saudi public universities. Achieving this goal will help to identify factors (e.g., facilitators and barriers) that may influence the provision of reasonable adjustments. Which in turn, it can help in improving the provision of these adjustments to students with LD in Saudi universities.

Firstly, I would like to thank you for considering taking part in this questionnaire. Please read through the information below before agreeing to participate (if you wish to). You have the right to ask any questions before deciding to take part by contacting the researcher [Mohammed Altumayhi] or his supervisor [Koutsouris, George]. Contacts details can be found at the end of this consent. The goal of this questionnaire is to find out about your knowledge and understanding of Learning Disabilities and reasonable adjustments as well as facilitators/barriers to the provision of reasonable adjustments. This questionnaire is divided into four parts. Part I collects demographic information. Part II collects information about your knowledge of Learning Disabilities and reasonable adjustments. Part III collects information on perceived facilitators/barriers toward the provision of reasonable adjustments. Part IV collects information about your ability and willingness toward the provision of reasonable adjustments.

Participation and Data

Participation in this questionnaire is entirely voluntary, and you can withdraw at any time without giving any reason by closing this questionnaire. Responses to all questions in this questionnaire are optional, except a response to this consent form is required.

All data will be collected only by the researcher and treated as confidential. Data will be stored in a password-protected electronic file and will be used only for purposes of this research project, which may include (e.g., publication, academic conference, or seminar presentation) in an anonymized form. Please be advised that some of the information, you will give, may be shared between the researcher(s), supervisor (s), or participant (s) in this project in an anonymized form. All data will be collected through [Quartics](#) which is a data controller concerning your personal data and, as such, will determine how your personal data is used. Please see their privacy notice [here](#). Quartics will share only de-identified data with the University of Exeter, for the purposes of research. Further information about your rights for your personal data is available from <https://www.exeter.ac.uk/ig/gdpr/>

Further Information and Contact Details

If you have a concern about any aspect of this study, please speak to me via email [ma808@exeter.ac.uk] or my supervisor via email [G.Koutsouris@exeter.ac.uk], and we will do our best to answer your query within 5 working days. If you remain unhappy or wish to make a formal complaint, please email the Chairs of the SSIS REC at the University of Exeter ssis-ethics@exeter.ac.uk

If you are 18 years of age or over and have read the information above and agree to participate with the understanding that the data you submit, will be processed accordingly, please check the relevant boxes below to get started.

- I certify that I am 18 years of age or over.
- Yes, I agree to take part.

Appendix Five: Information Sheet and Consent Form Phase Two

Study Title: Exploring Facilitators and Barriers Toward the Provision of Reasonable Adjustments to Students with Learning Disabilities in Saudi Public Universities.

Dear participant, firstly, I would like to thank you for considering taking part in this study. The purpose of this research project is to explore facilitators and barriers toward the provision of reasonable adjustments to Students with Learning Disabilities in Saudi public universities. Achieving this goal will help to identify factors (e.g., facilitators and barriers) that may influence the provision of reasonable adjustments to those students. Which in turn, will help in improving the provision of these adjustments to students with Learning Disabilities in Saudi universities. Please take time to consider the following information carefully and to discuss it with family or friends (if you wish), or to ask the researcher [Mohammed Altumayhi] via email at [ma808@exeter.ac.uk (mailto:ma808@exeter.ac.uk)].

A. Why we are doing this research.

Dear participants, as you know, the Kingdom of Saudi Arabia is aiming to include students with Learning Disabilities (LD) in all levels of education in any of its processes; one of these is through the provision of reasonable adjustments. This project aims to explore factors (e.g., barriers and facilitators) that influence provision of reasonable adjustments to students with LD in Saudi public universities. Achieving this goal will help in understanding barriers and facilitators that influence the provision of reasonable adjustments. Which in turn, it could help in improving the provision of these adjustments to students with LD in Saudi universities. Alongside with the kingdom's vision, researchers pointed out that more research regarding the provision of reasonable adjustments are needed (Binbakhit, 2020; Sreen, 2019; Alwabri & Binomran, 2018; Arafah & Mohammed, 2015). Thus, this study aims to address this gap. There is also a practical need to improve the provision of reasonable adjustments to students with LD in Saudi universities. I assume that one way to improve the provision of these adjustments is through researching and identifying factors (e.g., barriers and facilitators) that may influence the provision of reasonable adjustments to students with LD in Saudi public universities. I ask you to participate in this interview because I believe that to fully understand factors (e.g., facilitators and barriers) that may influence the provision of reasonable adjustments to students with LD in Saudi public universities, the voice of faculty members, staff members at disability centres/units, and students with LD themselves needs to be heard. This study considers that faculty members and staff members at disability centres/units are an important aspect of the academic success of students with LD in higher education. Thus, understanding their knowledge of Learning Disabilities and reasonable adjustments, as well as facilitators/barriers to the provision of reasonable adjustments, is critical to achieving the desired level of the provision of reasonable adjustments. Moreover, reaching this desired level cannot be done without hearing the voice of students with LD themselves. This interview is aiming to interview between 15 to 30 participants in total (e.g., this include faculty member, staff members at disability centres/units, and students with LD from different Saudi public university) as follow:

1. 5 to 10 male and female faculty members.
2. 5 to 10 male and female CDSs/Units staff members.
3. 5 to 10 male and female students with Learning Disabilities.

Please note that all of your interview' data will be used only to fulfill the requirements of my Ph.D. degree, participate in conference presentations, and publish journal articles in an anonymous form.

Do you understand what will happen in this research and why you have been asked to take part?

- Yes
 Not sure

B. What will happen if I take part?

Dear participant, this interview will be mainly voice and hold through Microsoft teams which is provided by the university, or through phone (which method you prefer). This interview will be only voice recorded for the purpose of this research and should take between 20 to 30 minutes. Mainly, the interview will aim to ask participants some questions in four main areas as follow:

1. The understanding of Learning Disabilities and reasonable adjustments.
2. The perceived facilitators/barriers toward the provision of reasonable adjustments.
3. The ability and willingness toward the provision of reasonable adjustments.
4. The available reasonable adjustments to Students with Learning Disabilities.

As a participant, there are no direct benefits or disadvantages for you of participating in the study. However, I hope, with your contribution, the results of this study could be used by the Ministry of Education or Saudi public universities to improve the provision of reasonable adjustments to students with LD in Saudi public universities. If you would like to know the results of this study, please see question number 9. Please be aware that during this interview, the researcher will not ask any questions that may identify you (e.g., name, age, gender, place of work, or job).

2. Do you understand what is involved if you take part?

- Yes
- Not Sure

3. Do you understand the possible benefits, disadvantages and risks of taking part?

- Yes
- Not sure

C. What happens next?

Dear participant, participation in this interview is entirely voluntary, and participants can withdraw at any time without giving any reason. If you decided to withdraw during the interview, you can stop the interview, and inform the researcher you decide to withdraw. If you decided to withdraw after the completion of the interview and want your data to be removed, please contact the researcher immediately to destroy your data. The distortion of data will be by deleting all digital and written copies of your interview from the researcher's one-drive account. Please be advised that once all data is collected and analyzed, participants cannot withdraw their data. All of your interview data will be treated as confidential. The digital recording of your interview will be deleted as soon as there is a written transcript of your interview following the Data Protection Act. All of your digital and written interview data will be saved directly to the researcher's private space in the University's systems which are password protected. Also, if you choose a phone interview, the interview will be recorded on a password-protected iPhone first and then uploaded to the University's One Drive server through a secure laptop for further analysis. Please be aware that participants will not be asked to appear on camera as the interview will be only a voice interview. Please note that the researcher planned to give participants from the third group (students with learning disabilities group) a shopping voucher, as a way to encourage students to participate in the interview. Please be aware you should complete the interview to receive the shopping voucher (the shopping voucher is 100 riyals Saudi from Noon.com (<http://noon.com>)).

4. Do you understand how the information you provide will be used?

- Yes
- Not Sure

Do you understand your rights and what will happen if you don't want to carry on with the study?

- Yes
- Not sure

6. Do you understand the information about payment?

- Yes
- Not sure

D. More details about how we keep your information.

Dear participant, I mentioned above all of your data will be collected only by the researcher and treated as confidential. All of the collected data will be collected for the purpose of this study and will be stored only by the researcher in his private space in the University's systems which are password protected. Also, be advised that no data will be stored for any future research as all of the collected data will be destroyed after the completion of this study. Please be confident that this project has been reviewed by the SSIS Ethics Committee at the University of Exeter. Moreover, the University of Exeter processes personal data for the purposes of carrying out research in the public interest. The University will endeavor to be transparent about its processing of your personal data and this information sheet should provide a clear explanation of this. If you do have any queries about the University's processing of your personal data that cannot be resolved by the research team, further information may be obtained from the University's Data Protection Officer by emailing dataprotection@exeter.ac.uk or at <http://www.exeter.ac.uk/dataprotection>. Further information and contact details If you have a concern about any aspect of this study, please speak to me via email ma808@exeter.ac.uk or my first supervisor at G.Koutsouris@exeter.ac.uk and we will do our best to answer your query within 5 working days. You may also contact the University of Exeter College of Social Sciences and International Studies (SSIS) Research Ethics Committee: email ssisethics@exeter.ac.uk. Please If you remain unhappy or wish to make a formal complaint, please email the Chairs of the SSIS REC at the University of Exeter: email ssisethics@exeter.ac.uk.

7. Please confirm you have read and understand the above information

- Yes
 Not sure

E. Getting started.

8. Please click to confirm and consent to taking part. Please provide your consent to take part in this research.

- I understand the information provided and agree to taking part.

9. Would you like to be updated about the results of the research? This would mean keeping contact details on record.

- Yes, please
 Not necessary

10. Please provide contact details below [your email or phone number]

The contact information will be used ONLY to setup a time for the interview and send you the link to the interview.

11. Please enter the date you consent to take part

Thank you for your interest.

Appendix Six: Faculty and staff members' Questionnaires Phase One

Questionnaire One: Faculty Members' Questionnaire

Part I - Demographic Information.

Please, choose or write what applies to you.

1- Location of your university in Saudi Arabia

North of Saudi Arabia	
South of Saudi Arabia	
Middle of Saudi Arabia	
West of Saudi Arabia	
East of Saudi Arabia	

2- Academic rank

Lecturer (Master)	
Assistant Professor	
Associate Professor	
Professor	
Other	

3- Nationality

Saudi	
Non-Saudi	

4- Gender

Male	
Female	

5- Age of years

20-29	
30-39	
40-49	
50+	

6- Years of experience

0 - 9	
10 - 19	
20 - 29	
30+	

7- Does your university have a Center of Disability Support Services or a Disability Unit?

Yes	
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No	
Not sure (no or not sure items 1 - 5 will disappear automatically from Part III)	

8- Does your university have a policy regarding the provision of reasonable adjustments?

Yes	
No	
Not sure (no or not sure items 11 - 14 will disappear automatically from part III)	

9. Have you received any disability-related training? For example, training regarding teaching and learning support for individuals with disabilities in higher education.

Yes	
No	
Other disability training, please give details	

10. In the Saudi literature, the following terms have been used to refer to the additional support provided to students with learning disabilities in higher education (e.g., reasonable adjustments/accommodation (Bakri, 2019), educational adjustments/accommodation (Alhossein, 2014), or support services (Binbakhit, 2020).

Which term do you use in your university?

Reasonable adjustments/accommodation	
Educational adjustments/accommodation	
Support services	
I know some of these terms, but not sure which term is being used in my university.	
I understand what you mean by these terms, but my university doesn't use any of them	
I don't know any these terms.	

This study will use the term reasonable adjustments/accommodation following Students with Disability Services Policies and Procedures at King Saud University. Please, if you use different term, consider the term reasonable adjustments in this questionnaire as the term you use in your university.

Part II- Knowledge and Understanding of Learning Disabilities and Reasonable Adjustments

To what extent do you agree with the items below?

Items		Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1.	Learning Disabilities are a disorder in one or more of the basic psychological processes that involve the understanding and use of written or spoken language.	1	2	3	4	5
2.	The term Learning Disabilities refer to students who exhibit lower academic achievement than their peers even though they have above-average intelligence.	1	2	3	4	5
3.	Reading or writing disorders (e.g., dyslexia or dyspraxia) could be considered a Learning Disability.	1	2	3	4	5
4.	Learning Disabilities are a result of another disability (e.g., visual or hearing impairment).	1	2	3	4	5
5.	Social, cultural, or environmental factors can cause a Learning Disability.	1	2	3	4	5
6.	The term reasonable adjustments describe the adaptations that are made to instruction and assessment which allow students with learning disabilities to access the content being taught.	1	2	3	4	5
7.	Reasonable adjustments can negatively affect the academic performance standards of university programs.	1	2	3	4	5
8.	Reasonable adjustments are connected to the academic	1	2	3	4	5

	success of students with learning disabilities.					
9.	The term 'reasonable adjustments' include different types of adjustments (e.g., adjustments related to teaching, learning, and assessment).	1	2	3	4	5
10.	I think that there are students with Learning Disabilities in my university.	1	2	3	4	5
11.	I believe that students with Learning Disabilities should be educated in higher educational institutions (e.g., universities).	1	2	3	4	5
12.	I believe that university students with Learning Disabilities should receive additional support such as reasonable adjustments.	1	2	3	4	5
13.	I expect that students with learning disabilities can be successful in higher education.	1	2	3	4	5

Part III – Factors Related to the Provision of Reasonable Adjustments

To what extent do you agree with the items below?

Items	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1. Disability centres/units informed me about the needs of students with Learning Disabilities with regards to reasonable adjustments.	1	2	3	4	5
2. The disability centres/units helped me to identify suitable reasonable adjustments for students with Learning Disabilities.	1	2	3	4	5
3. The disability centres/units provides me with the required assistance	1	2	3	4	5

	regarding the provision of reasonable adjustments.					
4.	The disability centres/units provides me with sufficient opportunities (e.g., training and workshops) regarding the provision of reasonable adjustments.	1	2	3	4	5
5.	Generally, disability centres/units' staff are willing to work and collaborate with faculty members regarding the provision of reasonable adjustments.	1	2	3	4	5
6.	My university provides awareness of university policy regarding the provision of reasonable adjustments.	1	2	3	4	5
7.	My university provides a clear written policy regarding the provision of reasonable adjustments.	1	2	3	4	5
8.	From my perspective, the policy of reasonable adjustments in my university is effective.	1	2	3	4	5
9.	There is a clear policy regarding the provision of reasonable adjustments in my university.	1	2	3	4	5

Part IV- Capacity, Resources, and Interest Regarding the Provision of Reasonable Adjustments.

A. The capacity and availability of resources regarding the provision of reasonable adjustments

To what extent do you agree with the statement:

There is capacity and resource available in my university in providing each of the following adjustments:		Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1.	Providing lectures notes before the beginning of the lecture.	1	2	3	4	5

2.	Large font size on presentation and exams questions.	1	2	3	4	5
3.	Alternative assignment formats (e.g., oral presentations instead of written assignments).	1	2	3	4	5
4.	Alternative exam formats (e.g., oral presentations instead of a written exam or multiple choice instead of essay tests).	1	2	3	4	5
5.	Extra credit assignments.	1	2	3	4	5
6.	Different room for exam.	1	2	3	4	5
7.	Extra time to complete coursework.	1	2	3	4	5
8.	Extra time on exams.	1	2	3	4	5
9.	A recording of the lecture.	1	2	3	4	5
10.	A 'note taker' (e.g., someone to take note of the lecture for students).	1	2	3	4	5
11.	A 'reader' (e.g., someone to read the exam's questions for students).	1	2	3	4	5
12.	A proofreader' (e.g., someone to assist with language).	1	2	3	4	5
13.	A calculator to use in class and on the exam to assist with mathematics assignments.	1	2	3	4	5
14.	A computer to assist with written assignments and exams.	1	2	3	4	5

B. Interest toward the provision of reasonable adjustments

Are interested in making the following adjustments?		Not interested	Slightly interested	Not sure	Somehow interested	Very interested
1.	Provide students with learning disabilities with lectures notes before the beginning of the lecture.	1	2	3	4	5
2.	Provide students with students with learning	1	2	3	4	5

	disabilities with a large font size on presentation and exam questions.					
3.	Allow students with students with learning disabilities to tape-record the lecture.	1	2	3	4	5
4.	Allow students with students with learning disabilities to have someone in class as a 'note taker'.	1	2	3	4	5
5.	Allow misspelling, incorrect punctuation, and poor grammar in students with students with learning disabilities assignments.	1	2	3	4	5
6.	Allow students with students with learning disabilities to have someone as a 'reader' during the exam.	1	2	3	4	5
7.	Allow students with students with learning disabilities to use a 'proofreader' with written assignments (e.g., someone to assist with language).	1	2	3	4	5
8.	Allow students with students with learning disabilities to use 'computers' in class and in the exam to assist with written assignments.	1	2	3	4	5
9.	Allow students with students with learning disabilities to use a 'calculator' in class and in the exam to assist with mathematics assignments.	1	2	3	4	5
10.	Allow students with students with learning disabilities to take the exam in a different room.	1	2	3	4	5
11.	Allow students with students with learning	1	2	3	4	5

	disabilities to extend the deadline for coursework.					
12.	Provide students with students with learning disabilities extra time for exams.	1	2	3	4	5
13.	Allow students with students with learning disabilities to do extra credit assignments when this option is not available for other students.	1	2	3	4	5
14.	Allow students with students with learning disabilities to complete alternative assignment formats (e.g., oral presentations instead of written assignments).	1	2	3	4	5
15.	Allow students with students with learning disabilities to take an alternative form of examination (e.g., oral presentations instead of a written exam or multiple choice instead of essay tests).	1	2	3	4	5

Please, the researcher would like to do a short online interview with participants (the interview will be only audio-recorded through Microsoft teams or mobile phone).

Would you consider to be interviewed? If yes, please give your email or phone number below.

Enter email or phone number	
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Questionnaire Two: Staff Members at Disability Centres/Units' Questionnaire

Part I - Demographic Information

Please, choose or write what applies to you.

1- Location of your university in Saudi Arabia

North of Saudi Arabia	
South of Saudi Arabia	
Middle of Saudi Arabia	
West of Saudi Arabia	
East of Saudi Arabia	

2- Qualification

PhD	
Masters	
Bachelors	
Diploma	
Certificate	
Other	

3- Area of Specialization

Please enter your major/s	
---------------------------	--

4- Nationality

Saudi	
Non-Saudi	

5- Gender

Male	
Female	

6- Age of Years

20-29	
30-39	
40-49	
50+	

7- Years of Experince

0 - 9	
10 - 19	
20 - 29	
30+	

8- Does your Center of Disability Support Services or Disability Unit have students with Learning Disabilities?

Yes	
No or I don't know, items 1 - 6 will disappear automatically from part III	

9- Does your university have policy regarding the provision of reasonable adjustments?

Yes	
No or I don't know, items 16 - 19 will disappear automatically from part III	

10. Have you received any disability-related training? For example, training regarding teaching and learning support for individual with disabilities in higher education.

Yes, please give details	
No	

10. In the Saudi literature, the following terms have been used to refer to the additional support provided to students with learning disabilities in higher education (e.g., reasonable adjustments/accommodation (Bakri, 2019), educational adjustments/accommodation (Alhossein, 2014), or support services (Binbakhit, 2020).

Which term do you use in your university?

Reasonable adjustments/accommodation	
Educational adjustments/accommodation	
Support services	
I know some of these terms, but not sure which term is being used in my university.	
I don't know any these terms.	

This study will use the term reasonable adjustments/accommodation following Students with Disability Services Policies and Procedures at King Saud University. Please, if you use different term, consider the term reasonable adjustments in this questionnaire as the term you use in your university.

Part II- Knowledge and Understanding of Learning Disabilities and Reasonable Adjustments.

To what extent do you agree with the items below?

Items		Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1.	Learning Disabilities are a disorder in one or more of	1	2	3	4	5

	the basic psychological processes that involve the understanding and use of written or spoken language.					
2.	The term Learning Disabilities refer to students who exhibit lower academic achievement than their peers even though they have above-average intelligence.	1	2	3	4	5
3.	Reading or writing disorders (e.g., dyslexia or dyspraxia) could be considered a Learning Disability.	1	2	3	4	5
4.	Learning Disabilities are a result of another disability (e.g., visual or hearing impairment).	1	2	3	4	5
5.	Social, cultural, or environmental factors can cause a Learning Disability.	1	2	3	4	5
6.	The term reasonable adjustments describe the adaptations that are made to instruction and assessment which allow students with learning disabilities to access the content being taught.	1	2	3	4	5
7.	Reasonable adjustments can negatively affect the academic performance standards of university programs.	1	2	3	4	5
8.	Reasonable adjustments are connected to the academic success of students with learning disabilities.	1	2	3	4	5
9.	The term 'reasonable adjustments' include different types of adjustments (e.g., adjustments related to	1	2	3	4	5

	teaching, learning, and assessment).					
10	I think that there are students with Learning Disabilities in my university.	1	2	3	4	5
11	I believe that students with Learning Disabilities should be educated in higher educational institutions (e.g., universities).	1	2	3	4	5
12	I believe that university students with Learning Disabilities should receive additional support such as reasonable adjustments.	1	2	3	4	5
13	I expect that students with learning disabilities can be successful in higher education.	1	2	3	4	5

Part III – Factors Related to the Provision of Reasonable Adjustments.

To what extent do you agree with the items below?		Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1.	Faculty members generally accept the reasonable adjustments advised by the disability centres/units for students with learning disabilities.	1	2	3	4	5
2.	Faculty members are willing to provide students with learning disabilities with reasonable adjustments as advised by the staffs members at the disability centres/units	1	2	3	4	5
3.	Faculty members are willing to communicate with staff members at disability centres/units regarding the provision of reasonable adjustments to students with learning disabilities.	1	2	3	4	5

4.	Faculty members believe in the effectiveness of reasonable adjustments for students with learning disabilities.	1	2	3	4	5
5.	Faculty members are willing to attend courses and workshops presented by the disability centres/units regarding the provision of reasonable adjustments for students with learning disabilities.	1	2	3	4	5
6.	Generally, faculty members are willing to work and collaborate with disability centres/units' staff regarding the provision of reasonable adjustments for students with learning disabilities.	1	2	3	4	5
7.	I receive adequate training and professional developmental programs from my university regarding the provision of reasonable adjustments.	1	2	3	4	5
8.	I receive enough support from my university toward facilitating the provision of reasonable adjustments.	1	2	3	4	5
9.	My university provides the disability centre/unit with enough funds to successfully accommodate students with learning disabilities.	1	2	3	4	5
10	My university does not provide the disability centre/unit with enough staff members to work with students with learning disabilities.	1	2	3	4	5
11	My university recruit disability centre/unit staff who are experts in learning disabilities.	1	2	3	4	5

12	My university provides awareness of university policy regarding the provision of reasonable adjustments.	1	2	3	4	5
13	My university provides a clear written policy regarding the provision of reasonable adjustments.	1	2	3	4	5
14	From my perspective, the policy of reasonable adjustments in my university is effective.	1	2	3	4	5
15	There is a clear policy regarding the provision of reasonable adjustments in my university.	1	2	3	4	5

Part IV- The capacity and availability of resources regarding the provision of reasonable adjustments

To what extent do you agree with the statement: 'There is capacity and resource available in my university' for each of the following adjustments:

Items		Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
1.	Lectures' notes before the beginning of the lecture.	1	2	3	4	5
2.	Large font size on presentation and exams questions.	1	2	3	4	5
3.	Alternative assignment formats (e.g., oral presentations instead of written assignments).	1	2	3	4	5
4.	Alternative exam formats (e.g., oral presentations instead of a written exam or multiple choice instead of essay tests).	1	2	3	4	5
5.	Extra credit assignments.	1	2	3	4	5
6.	Different room for exam	1	2	3	4	5
7.	Extra time to complete coursework.	1	2	3	4	5

8.	Extra time on exams.	1	2	3	4	5
9.	A recording of the lecture.	1	2	3	4	5
10.	A 'note taker' (e.g., someone to take note of the lecture for students).	1	2	3	4	5
11.	A 'reader' (e.g., someone to read the exam's questions for students).	1	2	3	4	5
12.	A proofreader' (e.g., someone to assist with language).	1	2	3	4	5
13.	A calculator to use in class and on the exam to assist with mathematics assignments.	1	2	3	4	5
14.	A computer to assist with written assignments and exams.	1	2	3	4	5

Please, the researcher would like to do a short online interview with participants (the interview will be only audio-recorded through Microsoft teams or mobile phone).

Would you consider to be interviewed? If yes, please give your email or phone number below.

Enter email or phone number	
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Appendix Seven: Faculty Members' Interview Questions

Interview questions أسئلة المقابلة		
<p>1. Please tell me a little about yourself.</p> <p>2. What does learning disabilities mean to you?</p> <p>3. Do you know any students who could be seen as having learning disabilities? If yes, what are their characteristics?</p> <p>4. Do you think these students are identified in your university? If yes, how?</p> <p>5. To what extent are these students supported in your university? If yes, in what ways are they supported?</p> <p>6. What do you think is the meaning of the term reasonable adjustments?</p> <p>7. Do you use this term or a different term in your university? If yes, why?</p> <p>8. With regards to this term, what do you think counts as reasonable?</p> <p>9. With regards to this term, what do you think counts as an adjustment?</p>	<p>1. من فضلك حدثني قليلاً عن نفسك.</p> <p>2. ماذا تعني لك صعوبات التعلم؟</p> <p>3. هل تعرف أي طلاب/طالبة يمكن اعتبارهم من ذوي صعوبات التعلم؟ إذا كانت الإجابة نعم، فما هي خصائصه؟</p> <p>4. هل تعتقد أنه يتم الكشف (تحديد) هؤلاء الطلاب في جامعتك؟ إذا كانت الإجابة بنعم، كيف إلى أي مدى يتم دعم هؤلاء الطلاب في جامعتك؟ إذا كانت الإجابة بنعم، بأي طرق يتم دعمهم؟</p> <p>6. برأيك ما هو معنى مصطلح التعديلات المعقولة؟</p> <p>7. هل تستخدم هذا المصطلح (التعديلات المعقولة) أو مصطلحاً مختلفاً في جامعتك؟ إذا كانت الإجابة ب"نعم"، لماذا؟ إذا كانت الإجابة ب"لا" ماهو؟</p> <p>8. فيما يتعلق بهذا المصطلح، ما الذي يعتبر أنه يمكن إعتباره (تعديلاً) برأيك؟</p> <p>9. فيما يتعلق بهذا المصطلح، ما الذي تعتقد أنه يمكن إعتباره (معقول) برأيك؟</p>	<p>المحور الأول "المعرفة والفهم". The first axis is Knowledge and Understanding</p>
<p>10. Are you offering reasonable adjustments in your university? Please give some examples</p> <p>11. How would you describe the provision of reasonable adjustments in your university? If limited why, if available why?</p>	<p>10. كيف تصف توفير التعديلات المعقولة في جامعتك؟ إذا كان متاحاً لماذا، إذا كان محدوداً لماذا؟</p> <p>11. هل يتم تقديم تعديلات معقولة في جامعتك؟ إذا كانت الإجابة نعم، يرجى إعطاء بعض الأمثلة.</p>	<p>المحور الثاني "توفر التعديلات المعقولة" The second axis is the availability of reasonable adjustments</p>

<p>12. Would you be interested in providing reasonable adjustments to students with learning disabilities? if yes why?</p> <p>13. What about your colleagues, do you think there are interested in providing reasonable adjustments?</p>	<p>12. هل أنت مهتم بتقديم التعديلات معقولة للطلاب/للطالبات ذوي/ذوات صعوبات التعلم؟ اذا نعم لماذا؟</p> <p>13. ماذا عن زملائك، هل تعتقد أن هناك اهتمامًا بتقديم التعديلات معقولة؟</p>	<p>المحور الثالث " الاهتمام بتوفر التعديلات المعقولة"</p> <p>The third axis is interest toward the provision of reasonable adjustment</p>
<p>14. How do you describe the capacity and availability of resources in your university regarding the provision of reasonable adjustments? is it enough? if yes, why do you think these adjustments are limited?</p>	<p>14. كيف تصف قدرة وتوافر الموارد في جامعتك فيما يتعلق بتوفير التعديلات المعقولة؟ هل هذا يكفي؟ إذا كانت الإجابة بنعم، لماذا هذه التعديلات محدودة؟</p>	<p>المحور الرابع " توفر القدرات والموارد".</p> <p>The fourth axis: The capacity and availability of resources</p>
<p>15. Are you aware of your institution's policy regarding the provision of reasonable adjustments? if yes why, if not why?</p> <p>16. Do you think there is a policy in your university regarding reasonable adjustments? if yes 16 apply, if no 17 apply.</p> <p>17. To what extent is this policy useful? Why? (If there is a policy).</p> <p>18. Do you think that a policy would be needed? If yes, how should this policy look like?</p>	<p>15. هل أنت على دراية بسياسة جامعتك فيما يتعلق بتوفير التعديلات المعقولة؟ إذا كانت الإجابة بنعم، لماذا، إذا لم تكن كذلك، فلماذا؟</p> <p>16. هل تعتقد أن هناك سياسة في جامعتك فيما يخص التعديلات المعقولة؟ إذا كانت الإجابة بنعم ١٧ تنطبق، إذا كان الجواب لا ١٨.</p> <p>17. إلى أي مدى هذه السياسة مفيدة؟ ولماذا؟</p> <p>18. أساساً، هل تعتقد أن هناك حاجة إلى سياسة؟ إذا كانت الإجابة بنعم، برأيك، كيف يجب أن تبدو هذه السياسة؟</p>	<p>المحور الخامس "سياسة التعديلات المعقولة".</p> <p>The fifth axis: Reasonable adjustments policy</p>

<p>19. Do you have a disability centre or unit in your university? If yes, questions A, B & C apply.</p> <p>20. To what extent do you think it is useful to have a disability centre or unit in your university? Justify your response.</p> <p>21. Have you received any training with regards to reasonable adjustments from the disability center or unit in your university?</p> <p>22. If yes, what kind of training? To what extent, was it useful/ relevant?</p> <p>23. To what extent do you think faculty members are aware of the disability centres or units in their universities? Justify your response. if yes, do you think they are aware of the provision offered by disability centres or units too?</p> <p>24. In the survey, most faculty members reported that there are students with learning disabilities in their universities, however, the actual number of these students appears to be very low in Saudi universities (only 24 students, in Saudi universities). Why do you think that is?</p> <p>25. What do you think can help you provide reasonable adjustments to these students?</p> <p>26. Finally, what do you think can stop you from providing reasonable adjustments to these students?</p>	<p>19. هل يوجد مركز أو وحدة إعاقة في جامعتك؟ إذا كانت الإجابة بنعم، تنطبق الأسئلة "أ" و "ب" و "ج"</p> <p>20. إلى أي مدى تعتقد أنه من المفيد أن يكون هناك مركز/وحدة إعاقة في جامعتك؟ هل هناك إي مبررات من وجهة نظرك؟</p> <p>21. هل تلقيت أي تدريب فيما يتعلق بالتعديلات المعقولة من مركز/وحدة الإعاقة في جامعتك؟</p> <p>22. ج. إذا كانت الإجابة نعم، فما هو نوع التدريب؟ هل كانت مفيدة أو ذات صلة بالتعديلات المعقولة؟</p> <p>23. إلى أي مدى تعتقد أن أعضاء هيئة التدريس على دراية بمراكز أو وحدات الإعاقة في جامعاتهم؟ برر ذلك (وضح). إذا كانت الإجابة بنعم، هل تعتقد أنهم أيضاً على دراية بالمواد التي تقدمها مراكز أو وحدات الإعاقة؟</p> <p>24. من وجهة نظرك، ما الذي تعتقد أنه يمكن أن يساعدك في توفير تعديلات معقولة لهؤلاء الطلاب؟</p> <p>25. من وجهة نظرك، ما الذي تعتقد أنه يمكن أن يمنعك من تقديم تعديلات معقولة لهؤلاء الطلاب؟</p> <p>26. أخيراً، في الاستطلاع الخاصة بهذه الدراسة، أفاد معظم أعضاء هيئة التدريس أن هناك طلاب/طالبات من صعوبات التعلم في جامعاتهم، ولكن العدد الفعلي لهؤلاء الطلاب منخفض جداً (فقط 24 طالباً في الجامعات السعودية). لماذا تعتقد ذلك؟</p>	<p>المحور السادس "الميسرات والمعوقات". The sixth axis: Facilitators and barriers</p>
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Appendix Eight: Staff Members at Disability Centres/Units' Interview Questions

Interview questions أسئلة المقابلة		
<ol style="list-style-type: none"> 1. Please tell me a little about yourself. 2. What does learning disabilities mean to you? 3. Do you know any students who could be seen as having learning disabilities? If yes, what are their characteristics? 4. Do you think these students are identified in your university? If yes, how? 5. To what extent are these students supported in your university? if yes, in what ways are they supported? 6. What do you think is the meaning of the term reasonable adjustments? 7. Do you use this term or a different term in your university? If yes, why? 8. With regards to this term, what do you think counts as reasonable? 9. With regards to this term, what do you think counts as an adjustment? 	<ol style="list-style-type: none"> 1. من فضلك حدثني قليلاً عن نفسك. 2. ماذا تعني لك صعوبات التعلم؟ 3. هل تعرف أي طلاب/طالبة يمكن اعتبارهم من ذوي صعوبات التعلم؟ إذا كانت الإجابة نعم، فما هي خصائصه؟ 4. هل تعتقد أنه يتم الكشف (تحديد) هؤلاء الطلاب في جامعتك؟ إذا كانت الإجابة بنعم، كيف إلى أي مدى يتم دعم هؤلاء الطلاب في جامعتك؟ إذا كانت الإجابة بنعم، بأي طرق يتم دعمهم؟ 6. برأيك ما هو معنى مصطلح التعديلات المعقولة؟ 7. هل تستخدم هذا المصطلح (التعديلات المعقولة) أو مصطلحاً مختلفاً في جامعتك؟ إذا كانت الإجابة ب"نعم"، لماذا؟ إذا كانت الإجابة ب"لا" ماهو؟ 8. فيما يتعلق بهذا المصطلح، ما الذي يعتبر أنه يمكن إعتباره (تعديلاً) برأيك؟ 9. فيما يتعلق بهذا المصطلح، ما الذي تعتقد أنه يمكن إعتباره (معقول) برأيك؟ 	<p>المحور الأول "المعرفة والفهم". The first axis is Knowledge and Understanding</p>
<ol style="list-style-type: none"> 10. Are you offering reasonable adjustments in your university? Please give some examples 11. How would you describe the provision of reasonable adjustments in your university? If limited why, if available why? 	<ol style="list-style-type: none"> 10. كيف تصف توفير التعديلات المعقولة في جامعتك؟ إذا كان متاحاً لماذا، إذا كان محدوداً لماذا؟ 11. هل يتم تقديم تعديلات معقولة في جامعتك؟ إذا كانت الإجابة نعم، يرجى إعطاء بعض الأمثلة. 	<p>المحور الثاني "توفر التعديلات المعقولة" The second axis is the availability of reasonable adjustments</p>

<p>12. What is the capacity and availability of resources in your university regarding the provision of reasonable adjustments? is it enough? if yes, why do you think these adjustments are limited? 13.</p>	<p>12. كيف تصف قدرة وتوافر الموارد في جامعتك فيما يتعلق بتوفير التعديلات المعقولة؟ هل هذا يكفي؟ إذا كانت الإجابة بنعم، لماذا هذه التعديلات محدودة؟</p>	<p>المحور الثالث " توفر القدرات والموارد". The fourth axis: The capacity and availability of resources</p>
<p>14. Are you aware of your institution's policy regarding the provision of reasonable adjustments? if yes why, if not why? 15. Do you think there is a policy in your university regarding reasonable adjustments? if yes 16 apply, if no 17 apply. 16. To what extent is this policy useful? Why? (If there is a policy). 17. Do you think that a policy would be needed? If yes, how should this policy look like?</p>	<p>13. هل أنت على دراية بسياسة جامعتك فيما يتعلق بتوفير التعديلات المعقولة؟ إذا كانت الإجابة بنعم، لماذا، إذا لم تكن كذلك، فلماذا؟ 14. هل تعتقد أن هناك سياسة في جامعتك فيما يخص التعديلات المعقولة؟ إذا كانت الإجابة بنعم ١٧ تنطبق، إذا كان الجواب لا ١٨. 15. إلى أي مدى هذه السياسة مفيدة؟ ولماذا؟ 16. أساساً، هل تعتقد أن هناك حاجة إلى سياسة؟ إذا كانت الإجابة بنعم، برأيك، كيف يجب أن تبدو هذه السياسة؟</p>	<p>المحور الرابع "سياسة التعديلات المعقولة". The fifth axis: Reasonable adjustments policy</p>

<p>18. Regarding people who work in the disability Center or unit in your university.</p> <p>19. What do think of the number of staff? is it acceptable?</p> <p>20. What about their expertise regarding learning disabilities? are their staff who are experts in LD? do you think more experts are needed?</p> <p>21. Have you received any training regarding reasonable adjustments from your university? If yes, was it useful?</p> <p>22. Is there any other training available to the disability centre or unit staff members?</p> <p>23. How would you describe support provided to CDSS/Unit staff might need from your universities? is there any specific support you wish is available to you?</p> <p>24. What do you think can help you provide reasonable adjustments to these students?</p> <p>25. What do you think can stop you from providing reasonable adjustments to these students?</p> <p>26. Finally, In the survey, most disability centre or units staff members reported that there are students with learning disabilities in their universities, however, the actual number of these students appears to be very low in Saudi universities (only 24 students, in Saudi universities). Why do you think that is?</p>	<p>17. بالنسبة لمركز/ وحدة الإعاقة في جامعتك.</p> <p>18. أ. ما رأيك في عدد الموظفين؟ هل هذا مقبول؟</p> <p>ب. ماذا عن خبرتهم فيما يتعلق بصعوبات التعلم؟ هل هم متخصصون في صعوبة التعلم؟ هل تعتقد أن هناك حاجة لمزيد من المتخصصين؟</p> <p>20. هل تلقيت أي تدريب بخصوص التعديلات المعقولة من جامعتك؟ إذا كانت الإجابة بنعم، هل كانت مفيدة؟</p> <p>21. هل هناك أي تدريب آخر متاح لموظفي مركز/وحدة الإعاقة؟</p> <p>22. هل هناك أي تدريب تمنيت لو كان متاحًا لك؟</p> <p>23. كيف تصف الدعم المقدم إلى لموظفي/موظفات مركز/وحدة الإعاقة في جامعتك؟ هل تريد إن يتم توفر أي دعم معين؟</p> <p>24. من وجهة نظرك، ما الذي تعتقد أنه يمكن أن يساعد في توفير التعديلات معقولة لهؤلاء الطلاب؟</p> <p>25. من وجهة نظرك، ما الذي تعتقد أنه يمكن أن يمنع من تقديم التعديلات معقولة لهؤلاء الطلاب؟</p> <p>أخيرًا، في الاستطلاع، أفاد معظم موظفي مراكز أو وحدات الإعاقة أن هناك طلاب/طالبات ذوي صعوبات التعلم في جامعاتهم، ومع ذلك، العدد الفعلي لهؤلاء الطلاب منخفض جدًا (24 طالبًا فقط، في الجامعات السعودية) لماذا تعتقد ذلك؟</p>	<p>المحور السادس "الميسرات والمعوقات".</p> <p>The sixth axis: Facilitators and barriers</p>
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Appendix Nine: Students with Learning Disabilities' Interview Questions

Interview questions أسئلة المقابلة		
<ol style="list-style-type: none"> 1. Would you consider yourself to have a learning disability? 2. How were you identified? (If they yes) 3. To what extent do you think having a learning disability can affect your studies? (If they say yes) 4. Do you experience any difficulties in your studies? (If they say no) 	<ol style="list-style-type: none"> 1. هل تعتبر نفسك أن لديك صعوبات التعلم؟ 2. كيف تم التعرف على صعوبات التعلم لديك؟ 3. هل تعتقد أن صعوبات التعلم يمكن أن تؤثر على دراستك؟ إذا كانت الإجابة بنعم هل تواجه أي صعوبات في دراستك؟ 	<p>المحور الأول "المعرفة والفهم". The first axis is Knowledge and Understanding</p>
<ol style="list-style-type: none"> 5. Have you heard the term reasonable adjustments? How do think that it means? 6. Is your university offering you some support for your studies? 7. Have you been offered any type of reasonable adjustments? If yes, questions A, B & C apply. 8. What type of adjustment/s was/were? Give examples. 9. Who provided you with these adjustment/s? 10. Did you find this/these adjustment/s useful? 11. Are there any specific reasonable adjustments you wish were available to you? 	<ol style="list-style-type: none"> 4. هل سمعت بمصطلح التعديلات المعقولة من قبل؟ ماذا يعني؟ 5. هل قدم لك أي نوع من أنواع التعديلات المعقولة؟ إذا كانت الإجابة بنعم، تطبق الأسئلة "أ" و "ب" و "ج" و "د". a. ما إذا كان نوع التعديل أو التعديلات؟ أعط أمثلة. b. من الذي قدم لك التعديل أو التعديلات؟ c. ج. هل وجدت هذا التعديل أو هذه التعديلات مفيدة؟ d. د. هل هناك أي تعديلات أخرى تجدها مفيدة؟ 6. هل هناك أي تعديلات أو خدمة محددة ترغب في إتاحتها لك؟ (نعم، لماذا) 	<p>المحور الثاني "توفر التعديلات المعقولة". The second axis the availability of reasonable adjustments</p>

<p>12. Are you aware of your institution's policy regarding the provision of reasonable adjustments?</p> <p>13. To what extent is this policy useful? Why? (If there is a policy)</p> <p>14. Do you feel that this policy supports you as a student with learning disabilities? If yes, why? If no, why? (If there is a policy)</p> <p>15. What do you think is needed to make this policy effective? (If there is a policy)</p> <p>16. Do you think that a policy would be needed? (If there is no policy)</p> <p>17. How should this policy look like? (If there is no policy).</p>	<p>7. هل لديك علم بسياسة جامعتك فيما يتعلق بتوفير التعديلات المعقولة؟</p> <p>8. هل تعتقد أن هناك سياسة في جامعتك فيما يتعلق بتوفير التعديلات المعقولة؟ إذا كانت الإجابة بنعم، تطبق الأسئلة "أ" و "ب" و "ج" إلى أي مدى هذه السياسة مفيدة؟ ولماذا؟</p> <p>ب. هل تشعر أن هذه السياسة تدعمك كطالب/طالبة من ذوي صعوبات التعلم؟ إذا كانت الإجابة نعم، فلماذا؟ إذا كانت الإجابة "لا" ، فلماذا؟</p> <p>ت. ج. ما الذي تعتقد أنه ضروري لجعل هذه السياسة فعالة؟</p> <p>9. هل تعتقد أن هناك حاجة إلى سياسة؟ (في حالة عدم وجود سياسة)</p> <p>10. كيف يجب أن تبدو هذه السياسة؟ (في حالة عدم وجود سياسة)</p>	<p>المحور الثالث "سياسة التعديلات المعقولة". The fifth axis: Reasonable adjustments policy</p>
<p>18. What challenges have you experienced with regards to the provision of reasonable adjustments?</p> <p>19. What would be needed to improve the provision of reasonable adjustments to you?</p> <p>20. In the survey, most faculty members reported that there are students with learning disabilities in their universities, however, the actual number of these students appears to very low in Saudi universities (24 students, both male and female). Why do you think that is?</p>	<p>11. ما التحديات التي واجهتها فيما يتعلق بتوفير التعديلات المعقولة؟</p> <p>12. ما المطلوب لتحسين توفير التعديلات المعقولة لك؟</p> <p>13. أخيرًا ، في الاستطلاع ، أفاد معظم موظفي مراكز أو وحدات الإعاقة أن هناك طلاب/طالبات ذوي صعوبات التعلم في جامعاتهم، ومع ذلك، العدد الفعلي لهؤلاء الطلاب منخفض جدًا (24 طالبًا فقط ، في الجامعات السعودية) لماذا تعتقد ذلك؟</p>	<p>المحور السادس "الميسرات والمعوقات". The sixth axis: Facilitators and barriers</p>

Appendix Ten: Interview Transcripts

Interview One
Please tell me a little about yourself.
This is M.H., a sign language interpreter at the Center for Persons with Disabilities at King K. University. We specialize in information systems with the deaf, an "Information Systems Diploma". I specialize in special education, mental disabilities, and I have previous experience with autism, as I am a former autism specialist, so I can address any disability. Also, we work in the centre doing administrative work, but simple administrative work because we are translators, so our work is a little stressful.
What does learning disabilities mean to you?
To be honest, my background is very limited about learning disabilities, but what I know is that they are those who have insufficiency in basic skills such as reading, writing and mathematics. Also, I did an interview a while ago with people with disabilities at the university.
Have you noticed anything special about them?
They were very hesitant, and I got the sense from these people when I met them that they were saying: I feel that I do not have rights, or they did not know their rights in the university, or they did not know their requirements, and what facilities were offered. Would they be treated like an ordinary student, or would they be treated like a student with special needs?
What about their academic characteristics?
Yeah, their reading is so limited even if the given text is understood and simple.
Have you seen a student with learning disabilities in the disability unit or centre in your university?
There are, and there are even deaf people who have difficulties.
Do you think these students are identified in your university? If yes, how?
No; I don't think so, I mean, we have a limited number of students with disabilities, and the fewest have learning difficulties. Most of the disabilities that I see, and the centre is interested in apparent disabilities, such as blindness, deafness, motor disabilities, not hidden disabilities such as learning difficulties. Mainly the student is not aware whether she has learning disabilities. Also, there is no specific mechanism whereby I can know that these are learning disabilities unless the student comes and says: "I have learning disabilities", and not all students come and say: "We have learning disabilities". Even before applying to the university, they will not share their diagnosis with learning disabilities. Therefore, identification of this category is weak or almost non-existent at the centre.
What do you think is the meaning of the term reasonable adjustments?
I think that reasonable adjustments are made so that there is no harm to ordinary people, those in the same learning environment, and people with disabilities, regardless of their disability. The reasonable adjustments are so that they do not harm either party; do not treat ordinary people and people with disabilities unequally in the simplest possible form.

Do you mean reasonable adjustments are what help students with disabilities to continue their education but do not affect their peers?

I mean what does not affect their peers, and so they can continue in their education with ease. Meaning from the viewpoint of a student with a learning disability they are like their peers, there is no visible difference in this adjustment, and at the same time, the student's peers do not see that there is a difference that affects them, whether it is in curricula or adjustments that bore them or make them feel that the task is too easy for them.

Do you use the term (reasonable adjustments) or a different term in your disability unit or Centre? If yes, why?

We use the term (Facilities, in Arabic 'التسهيلات-altashilat') more, and I would describe them more as facilities; because by saying: adjustments, I mean they are adjustments that continue for a short or long term. We are not continuous over the short or long term. I may be told in the second week that this facility or this adjustment that I wanted to continue has been refused. I then go back to the persuasion stage and the stage of showing the problem, and what are the appropriate ways to solve it. We say facilities and we communicate with each other amicably most of the time, first they say: solve it amicably between you. If they refuse amicably, we solve it with a letter and an official destination, and a centre raises a letter to the college or raises it to His Excellency so that they look into this matter. I see the term "facilitation" is used and gradual, meaning even when we say: adjust, they say: No; What we amended, we made it easy on our own.

So, from your point of view, we say: facilities not adjustments

Yes, on the contrary, I would like it to be an adjustment. Because, in my opinion, the adjustments will be for a minimum, a little longer. Well, you know their mechanisms, steps 1, 2, 3, but as facilitation, possibly the university in terms of curricula, courses, tests, or costs, says: No; We were the first to be lenient, but now we will not be lenient, but if there is an adjustment, they are forced to abide by this and adapt based on the adjustment. The term reasonable adjustment is bigger than the term we use at our university, which we are experiencing.

Since you talked about (facilities), from your point of view, what does this term mean to you?

Assistance, provision of services, support, support, development, access to all persons with disabilities, what we are trying to say is: equality.

With regards to this term, what do you think counts as 'reasonable' and as 'adjustment'?

I'll give you an example: If we give PowerPoint presentations during lectures, their presence is a very necessary requirement. I mean, we have more than one form of facility, there is supposed a faculty member to send the PowerPoint presentations before the next lecture via 'Blackboard'. This program includes lectures, costs, and advertisements for the faculty member themselves. Why not post a lecture on the Blackboard before the lecture is due? If, for example, lecture notes are available before the lecture, the student will come to the lecture mainly with these notes. Because we are in an academic community, academic terms may be greater than the level of

understanding of the student, I see this easily, and from improvement, and from the quality of education, it is in an easy way to help students with learning difficulties.

Are you offering reasonable adjustments (or facilities) in the disability unit or Centre?

At the centre, we do all the services, all the services even if a student does not have a laptop or a tool that allows her to complete her tasks or work. We provide her with an iPad or a laptop if needed so that there is no obstacle. Also, now we are in the process of opening a centre for people with disabilities, the women's section. This centre is for us. Before we used to move from one place to the other. In the new centre, there is a special lab with equipped offices, in which computers are provided for people with disabilities in the event that they have a test that is supposed to be tested in the centre. It has even Braille devices available, so that the blind can perform the test comfortably without the help of facilities, and this I see as a convenience.

How would you describe the provision of reasonable adjustments in your disability unit or Centre?

To be honest any person who needs help from people with disabilities, whether they have learning disabilities, blindness, movement, etc., the centre does not hesitate to provide the service. The best example that happened to us before was an issue that the blind women had. They used to say: We cannot walk because there are female students sitting on the stairs, so we hope that this issue will be resolved. Immediately the centre wrote a letter and submitted it to the same college that the students complained about. On the second day, the issue was resolved. There is flexibility in cooperation with some departments, but some departments honestly are not flexible, or flexible at first, and then they are not. They saw the interest of their college, where to go, and they said: No; We work with the majority if the majority nondisabled, so we work based on this.

What is the capacity and availability of resources in your university regarding the provision of reasonable adjustments?

I see it at a low level of fluctuation because we do not have an infrastructure, a basic infrastructure. Now all that is going on at the centre are in my view, all are individual efforts. I prefer or I hope that there will be regulations, so that I can assist students with disabilities with these regulations. If the regulation requires that I make a regulation for each disability category, why not do it, and implement it immediately. Because even those in the Centre's environment, some of them do not understand the meaning of special education. Also, there is no interest in people with disabilities, I mean, yes, there is an interest in the visible image of the community, we have a centre for people with disabilities only, but not at a stage where I have a vision that I am developing the centre, developing the workers in the centre, supporting them with courses, assigning them the authority to give their suggestions. This is neither in regulations nor following the strategy that other universities are following. Also, some universities want to collaborate with us, but there is no encouragement to do so. I mean, you know that when it comes to individual efforts the fatigue is doubled. It is possible that I am reaching the stage where I am becoming frustrated. I do not give; because I do not find an appreciation for the work that I offer. In contrast, it is different when the university itself supports the centre and its development and investigates and researches its problems.

Are you aware of your institution's policy regarding the provision of reasonable adjustments?

No, because the centre just started two years ago, now we are in the second year. The supervisors of the centre did not have a clear orientation. What I saw of dealings with them, as a sign translator, and of my contact with them and in dealing with them in terms of policies and regulations, there is no clear plan.

Why there is no clear plan?

I see that as people, I mean, we are here under the umbrella of the centre. We are considered as affiliated, I mean, as an affiliate in the centre, my authority is weak, not as a supervisor, I see from this point of view that the supervisor may have been entrusted with this work and they work in it as an entrustment, not as a development for the department itself. If there is a desire to develop, we could benefit from other universities that have preceded us in stages.

So, do you think that a policy would be needed?

Of course, at the beginning of everything you have to deal with the same group (people with disabilities), and the same group are not ignorant, they understand their problems and also their solutions to these problems. So why do we, before we start, say: "We'll start a plan, and they exaggerate the subject of the plan? Why not first form a committee? The committee includes a faculty member, university officials, supervisors of centres that can provide support to them, and from the same category (students with disabilities), we can take three, four, five representatives, students with learning disabilities, the blind students, deaf students, from these people. Why doesn't a meeting take place? What prevents it? It won't even take us a lot of time, maybe within a week we could have set up a plan for years.

How should this policy look like?

It is very necessary for it to be in a clear division, meaning for the student themselves. I am not talking about the faculty members; I am talking about the students. There are many students ignorant of what facilities and services are available to them, and their rights at the university. Is it assumed that there are comprehensive regulations, that identify how a faculty member should deal with you? And what is available to you to ask them for? This is one of the students' rights, and if it is rejected, you can complain or refer to the Center for Persons with Disabilities to deal with this problem. Is it assumed that there is a list of the regulations on campus, that you, as a person with disabilities, have? It is assumed that it provides you with services and facilities. If any services have been rejected, you can return to the Center for Persons with Disabilities. There could also be an additional regulation such as what the centre could be provided to me as a person with disabilities? The policy should be flexible, very flexible, depending on the circumstance. It is impossible to unite everyone with one circumstance, we need flexibility. The faculty members or the college that accepts people with disabilities are supposed to adapt themselves to people with disabilities. Why do you say: "No, why did we accept them"? Why is this? It leads to the point of regret.

Regarding people who work in the disability Center or unit in your university. What do think of the number of staff? is it acceptable?

Absolutely unacceptable. In the centre for persons with disabilities, the employees are assumed to be specialized in special education. We have employees who are not from special education, maybe I am the only one who specialized in special education in the centre, and our main supervisor in the male section is specializing in special education with autism, a master's degree in autism. Others for example have a master's degree in jurisprudence or in office management, but I need to deal with this category (students with disabilities). I mean, I was shocked that one of the female employees said: "I do not know about autism, people with motor disabilities, or there is such a thing as learning disabilities in special education. I thought that deafness is the only category," and I expect that she thought that because we came as sign language interpreters. The number of employees is very small in general, especially in the field of specialization. Also, no one specialized in learning disabilities. I expect that if there was a person who specialized in learning disabilities in the centre, it would be possible to search for a way to identify these people for example through a questionnaire, an inventory, conducting courses or seminars, or raising awareness or educating so that it attracted the group indirectly so that there is no embarrassment or harm, but we don't have this, we don't have an employee who cares about this category.

Have you received any training regarding reasonable adjustments from your university? If yes, was it useful?

No, I very much wish and desire that if it existed, it would have given us light on the path we are walking on. We are literally walking into the unknown, and this word is the most accurate description.

Is there any other training available to the disability centre or unit staff members?

Unfortunately, this is sorely missed. We do not have any courses in the centre for the employees themselves. To develop their tasks, responsibilities, or even awareness of people with disabilities, there is nothing at all.

How would you describe the support centres/unit staff might need from your universities? Is there any specific support you wish was available to you?

There is no support, as I told you: there is no support, even if we need something or want something. Let us wait between a period and for a period for the budget. Where does the budget come from? From the Student Fund, the support that comes is routine. I expect that it is routine, and all departments take it, which is letters of thanks from His Excellency from time to time, but even as a follow-up to the centre, I did not see follow-up or monitoring, they only monitor attendance and absence, but they do not monitor the work, tasks, and achievements. I soon learned that the centre is in the red line, meaning that if the centre continues like this, we can close it, the centre for persons with disabilities, so I said **why is it in the red line?**

Finally, what do you think can help you provide reasonable adjustments to these students?

First and foremost, benefiting from those who preceded us, when we take the experiences of others, we can increase their experiences, we have crossed the step of a thousand miles. The second need is that I can fill the place with courses. It is possible to develop courses, whether in the administrative aspect or all aspects of specialization. A request for participation to attend with others; Because this broadens the perception and changes the culture. The same as what I told you: We do not have staff who are specialized.

Interview Two

Please tell me a little about yourself.

I am M. S., majoring in Islamic studies. While I was a student at the university, I worked as a volunteer in the Center for Persons with Disabilities for 4 years. Then for 5 or 7 years to cooperate with contracts, after which the royal decree came to demarcate, and we were ordained. Generally, I have been working at the centre for about 15 years, and now I am the director of the centre.

What do you know about learning disabilities?

A while ago, maybe a year ago, before Covid 19, they set up a course for us, they came to us at the centre. I mean, I benefited a lot from it in my life and at work. Before, we did not know what learning disabilities meant. But after this course, we learned many things, including that a student with a learning disability may be present in the class, but the teacher may not know that the student has a learning disability. Because students appear normal as there is nothing wrong, but the disability is not visible.

A student can read the letters in reverse. A student can see the words are scattered, but the words are not because the words do not reach their brain. For example, students can the word 'learning disabilities' as 'disabilities learning', the information does not reach them easily, this is what I know.

Do you have students with learning disabilities in your university's disability unit or centre? If yes, what are their characteristics?

Currently, we have students with learning disabilities at the centre, but the majority have graduated, and we get 30 students a year: maybe one or two students who have a learning disability. I mean those who have reports prove that they have a learning disability.

The most prominent characteristics are that the student needs someone to read to them in the tests, the information is not easily accessible to them. In the lecture, the teacher is notified that they have a student with a learning disability. So, the teacher can give her more attention in the same hall. In the exams, she is not tested with other female students. Students with special needs, visual impairments, learning disabilities and some movement disabilities are tested in a hall for their condition because the sound and the disturbance can be quieter.

Do you think these students are identified in your university? If yes, how?

Learning disabilities were not included in the registration until 7 years ago. Before, students with learning disabilities who graduated from high school were not accepted into the university. Meaning female students could be accepted to the university but were not fully accepted as students with learning disabilities until 5 years ago, or the past 6 years.

Now, at the admission and registration, the student chooses the type of disability; for them to have a special registration. This means that the admission and registration know that this student with disabilities has a movement disability, a hearing disability, a visual disability, but learning disabilities are not listed.

Also, the student must have evidence that they are a person with a disability; if they are blind or if they have a learning disability, for example The centre, in turn, has a

counselling centre. If the student needs tests, we make an appointment for them with the University Counseling Center. We do an intelligence test for them, that is.

Why are learning disabilities not listed?

I asked for a while, and to date, I have not received a real response, but the student attaches their complete reports and writes about their condition. If there are learning disabilities, they write that.

What do you think is the meaning of the term reasonable adjustments?

How? How we refer to the student, or what services we provide to them?

I mean, do these services fall under a specific name, such as facilities or adjustments?

We have many services, educational services, psychological services, social services, and entertainment services. Services for students with learning difficulties are put within the "educational services" at the university, including these things we provide them with services, even in recreational services for all students of persons with disabilities, we can take them for a trip to Umrah, we can arrange a barbecue day for them, that is entertainment for them, on international days they participate with us.

Are you offering reasonable adjustments in the disability unit or Centre? Please give some examples.

When students with learning disabilities get accepted, they are categorized as students with learning disabilities at the centre. For example, when a student's schedule becomes ready, we become responsible for it. We download student's schedules by communicating with the educational affairs in the college. The student's schedule is downloaded. If the student needs to delete or add a course, the centre is responsible for the deletion and the adding. The student, I mean, needs a specific professor. They dealt with a professor and the professor was very cooperative. The centre can communicate with the college and ask for the name of this professor that teaches this student. Also, students' exams, such as midterm and final, are all at the Center for Persons with Disabilities. Students receive extra time on exams. For example, the time can be at the most an hour and at the least 15 minutes, meaning if the test is two hours, the doctor can give us half an hour more or give us 15 minutes more than the time.

How would you describe the provision of reasonable adjustments in your disability unit or Centre?

Now we are in the process of having a guide, the center's guide, we are working on it, in developing it every year we develop this guide in all services, the services of the centre are provided. The center's services are present in it, from the vision, from the mission, from the goals, from the services provided, from everything.

What is the capacity and availability of resources in your university regarding the provision of reasonable adjustments?

After the students with learning disabilities were accepted, the centre began to develop this category. We run courses for the center's employees, especially an employee who is directly dealing with the student. We do courses for them in learning disabilities, and we make some female employees enter specific courses for learning disabilities or all disabilities. Now even chronic diseases are included, for example, people with disabilities who have chronic diseases such as heart diseases, cancer, kidney failure, these are all combined, even epilepsy. Epilepsy was not previously included among the

disabilities, but now it is. Now we have made our employee take a course in first aid, why? Because if something happened to a student, she knows how to act.

Regarding policy and regulations, do you think that everyone is aware of it?

Yes, it is true that the female students come, and they are aware of it. The female students also researched and accessed information; they know that there is a centre.

Is there a policy related to the provision of reasonable adjustments?

Of course, we are responsible for students with disabilities from their acceptance in general, and in particular for students who have learning disabilities from the first day they are accepted into the university. The (Facilities, in Arabic 'التسهيلات-التسهيلات') will be provided by the Center for Persons with Disabilities. We are responsible for accepting the student and registering them into the university until the student graduates. We are a link them and the colleges. Any problem that the student faces in general, a student with a disability or learning disabilities, the student should go to the centre.

Regarding people who work in the disability centre or unit in your university. What do think of the number of staff? Is it acceptable?

The number of employees in the centre is now 10. We were 12 employees, Mrs. N. H. passed away, and Mrs. M. come to us and left us. Now there are 10 female employees in the centre, and we are in the process of increasing the number in the coming days. The centre will become the Institute for Persons with Disabilities. When the institute becomes independent, we will have a special budget, and the departments are more open, for example, there are incoming and outgoing in different departments. The institute is bigger than the centre, that is. **Do you expect that if it is transformed into an institute, it will increase the quality of service, and the situation will be better?** Yes, sure, we were an office, in the beginning, the office of Persons with Disabilities. Our services were used by students with visual and motor disabilities. When a decision came and we became the centre for People with Disabilities, we started to develop, we started accepting all students. When we compare our services to 10 years ago or 5 years ago, there is a big difference between the services we offer now to female students.

What about their expertise regarding learning disabilities? Are there staff who are experts in LD?

We have a female social supervisor, with a specialization in sociology, a master's degree in sociology. She is responsible for the students. If a student has a learning disability, she diagnoses the student, an initial diagnosis. She is a social worker, not a supervisor. She directs the student if the student needs more than this diagnosis to the University Counselling Center. The University Counselling Center has doctors who specialize in various fields, including learning difficulties, that is. Do you think more experts are needed? Possibly, why not? It is possible in the future that specialists will come to us. The University Counseling Center is affiliated with the Deanship of Student Affairs, it cooperates with us and shares this issue with us, I mean any problem, they provide the University Counseling Center, specialists from the Department of Psychology, from the Department of Sociology, from different sections, like this.

Regarding reasonable adjustments, is there any other training available to the disability centre or unit staff members?

For the employees of the Personnel centre under the Deanship of Student Affairs, there are training courses such as how to deal with people with disabilities. This is the most important point. How you deal with female students with disabilities in general, training courses continuously, I mean, courses for people with disabilities, and the university provides us with courses. **Please could you give examples?** For people with disabilities, we took a sign language course, a learning disabilities course, a course on how to deal with the blind, and a course on the International White Cane Day. **Is there any specific support you wish is available?** I had a course about learning disabilities and wish this course could be repeated.

How would you describe the support that is provided to the centre by your university?

It is true, the university is fully cooperative, especially for people with disabilities in everything, even at the university's graduation ceremony. The university is concerned with people with disabilities, and their families. At the graduation party, a committee is formed to provide comfort and to help the student with disabilities and hand her the student's robes, and to provide her with a chair, even the student with mobility impairment is provided with a wheelchair, all so that the student feels like normal. From my experience, it is very, very cooperative financially.

A student with disabilities is accepted at a slightly lower rate than the normal student, and with great interest from the university director, from the Deanship of Student Affairs, and from admission and registration for students with disabilities. This year, we accepted over 45 female students with disabilities, the largest number was accepted this year in the history of the Center for Persons with Disabilities. 45 female students were accepted into the colleges they love, I mean in female students, colleges now have become direct colleges, meaning the student enters, for example, the College of Communication and Media, she enters the College of Law, she enters the College of Science, no Scientific preparation is required to enter the Faculty of Economics and Administration, the Faculty of Arts, you can just do it directly.

What do you think can help in providing reasonable adjustments to students with learning disabilities?

In fact, it is possible for a student with learning disabilities do not want to admit that they have them. She does not register with the Center for Persons with Disabilities as a student with a learning disability. When she starts to study at the university, she faces difficulties from faculty members, her GPA drops. Then some faculty members may discover that the student has a learning disability. When she is directed to us, we say to the student "Why did you not come to the centre?" She says: "I do not have a learning disability". Some students do not like to admit that they have a learning disability.

I actually contacted a student personally, who refused to admit that she had a learning disability, but it is true that we have complete confidentiality to the extent that no one would even guess they had a disability. It is impossible to inform anyone that this student has a learning disability, unless the professors who teach them only; privacy is important. I mean some female students admit that they have learning disabilities, and their GPAs are higher because of the services provided to them by the university, and by the Center for Persons with Disabilities. I mean, I tell you: a very small percentage, I

mean, 1% of the female students come to you and tell you That they do not want to be categorized as a student with learning disabilities.

What about things that can prevent the provision of reasonable adjustments?

This is when the student does not admit that they have learning disabilities, if the student came to the centre, and went through their papers and proved that they were students with learning disabilities, the centre and the university would be with her heart and soul, all services would be provided to her, and all facilities provided to her within the limits of her teaching. **What about faculty members; are they collaborative in providing reasonable adjustments?** Some of them, I mean, I tell you: the majority of them are very, very cooperative with us, especially in learning disabilities. Perhaps 1% of faculty will come to you and say: “She is like a normal student.” Then she finds out, after a while, that she is not. At first, they refuse, saying: “No, because it is considered a hidden disability that no one knows except the person who sits with the student and knows the student”. Hidden disabilities are not the same as the motor disability, blindness, and visual disabilities, and hearing disabilities, it is clear, but learning disabilities are considered hidden disabilities that nobody knows about, unless the student knows it, or it is in their reports. In fact, students with learning difficulties are very successful, if a good environment is provided for them, educational services are provided for them, and a suitable place is provided for them.