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What is revealed about disability services and how they are communicated to autistic students in higher education institutions in the UK and Saudi Arabia through the medium of the university website: A documentary analysis

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Abstract

Disability services in higher education (HE) settings broadly focus on removing barriers to learning and enhancing students' learning and development. This research focuses on understanding how disability services are presented to students with autism in the websites of Saudi and UK HE institutions. University websites are especially important for students with disabilities, including students with autism, as these are likely to be the first medium they encounter regarding how a university views them and responds to their needs. However, little, if any, research seems to have previously been conducted in this area. A clear need therefore exists to understand how the disability services presented to this population are mediated via such websites.

The research project reported in this thesis was conducted in three stages. The first stage involved identifying the types of services that seem to be offered to university students with autism in the websites of 153 UK and 58 Saudi Arabian universities, as well as manually evaluating the visibility and navigability of these websites using a set of criteria. Identifying the types of services that seem to be offered in HE institutions' websites helped develop a better understanding of these services and facilitated the second stage of this research. The second stage involved a sample of 15 Saudi and UK HE institutions' websites that seemed to offer autism-specific services rather than just generic services, which were examined through in-depth discourse analysis and thematic analysis. This stage closely evaluated how HE institutions communicated their autism-specific provisions to the visitors of their websites. The third stage involved content analysis and thematic analysis of the websites of four universities—two from Saudi Arabia and two from the UK—as well as a comparison of these universities in terms of the influences that seemed to shape the organisation of their disability services. This stage aimed to understand the differences between the UK and Saudi contexts in the disability services offered to autistic students.

The findings of this research show the nature of the provision offered according to the websites of Saudi and UK universities and the way this provision is communicated. The results of this study may benefit students on the autism spectrum, as well as professionals in the field, by revealing how disability service centres seem to understand the needs of university students with autism, as portrayed through their websites.

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LIST OF ABBREVIATIONS

APA   American Psychiatric Association
ASD   Autism Spectrum Disorder
DSA   Disabled Students' Allowance
DSM –IV   The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition
DSM-V   The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
HE   Higher Education
HEIs   Higher Education institutions
HESA   Higher Education Statistical Agency
KAU   King Abdul Aziz University
KSU   King Saud University
SA   Saudi Arabia
UCL   University College London
UCL (IOE) University College London (Institute of Education)
UK   United Kingdom
USA   United States of America

CHAPTER 1: Introduction

1. Introduction

The provisions and services for autistic adults in Higher Education (HE) have rarely been examined (Masterson and Meeks, 2014). According to Zeedyk *et al*. (2014), this knowledge gap exists internationally. This study aims to examine the documentary portrayal of disability services for autistic students in UK and Saudi Higher Education institutions (HEIs). As a member of the teaching staff of the Special Education Department at a Saudi University, I hope that this study will benefit students on the autism spectrum, as well as professionals in the field, by revealing how disability service centres seem to understand the needs of university students with autism, as portrayed through their websites. This introduction chapter includes a statement of the research problem, its associated questions and the theoretical background of the study. Also, this chapter presents an overview of the Saudi and UK HE systems, autism provision in SA and the UK and, finally, this thesis' key terminology and organisation.

1.1 My personal position

I have been a lecturer at a Saudi University (College of Education) since 2008. My interest in the research topic of disability services stems from my experience in working with autistic individuals since 2007/2008 and my interest in developing autism educational research. I have developed an interest in developing and improving disability services for university students in SA with a specific focus on including university students on the autism spectrum in HE. As stated above, I have had the opportunity to conduct a case study to research the challenges and opportunities in HE for an individual on the autism spectrum (Almasoud, 2013). This case study is presented in summary form below as this inspired me to conduct my research in the area of HE for autistic students.

1.2 Case Study

This in-depth case study investigated the level of support one autistic adult, Khalid (a pseudonym), received after high school and the difficulties he faced in adulthood in SA. It

was a convenience sample, having met Khalid at a charity event for autistic people. Academically, Khalid progressed very well from primary to high school. However, after his graduation in 2008, he was excluded from Saudi universities for four years. He was unable to obtain a scholarship or hold a job despite achieving a 90% grade point average (GPA) which should have qualified him to work and study on an equal footing with his peers who did not have disabilities. The family turned to a Saudi autism association for assistance, but its only involvement was to write to the Ministry of Higher Education- which is now known as the Ministry of Education - requesting that Khalid be allowed to study at any public university in the capital city of Riyadh or that his study at a private university should be funded. The ministry refused to pay the tuition fees for a private university but wrote to a public university to request that it offer Khalid admission. However, this public university did not take any action. There was not much else the autism association could do, because it lacked social groups and employment services for autistic adults. Ultimately, Khalid's only option was to accept a grant to study a computer course offered by the Autism Research and Training Centre in Riyadh, a private institute in SA. He did well in this course.

In this case study, the aims were to determine the following:
- The barriers excluding Khalid from HE; and
- The level of services and support, focusing on education and employment, offered for autistic adults in SA.

Qualitative data were collected through interviews with Khalid's father, the Dean of Admissions and Registration for a public university in Riyadh, and the head of a private university in Riyadh.

Khalid's father spoke on behalf of his son, who was extremely frustrated and isolated at the time as a result of his exclusion from HE. The father declared that Khalid had been left behind, without an education, a job or friends. He said that his son's state had affected the whole family and that they did not know where to turn.

The Dean of Admissions and Registration for a public university in Riyadh indicated that public universities were not qualified to include autistic students due to many barriers. For instance, there was a lack of awareness amongst the students and teaching staff; the disability services centre had no academic advisor with autism specialisation; and the university

environment would need to be changed to accommodate the sensory needs of these students before they could be admitted.

The head of a private university responded that the institution welcomed students with any disability, as long as they could pay the tuition fees. In Khalid's case, to be admitted to that university, he would need a sponsor (e.g., the MOHE, a business or a charity).

From analysis of the data collected, it seemed that there was: a lack of transition services, regulations and funding; an absence of autism advocate roles; and capacity limitations in the autism organisations and disability services centres. Moreover, the family was not fully aware of their son's educational rights and missed many scholarship opportunities available abroad for students with disabilities.

After intense work for about two months by volunteers from a Saudi University in Riyadh who contacted many local organisations, charities, colleges and universities, Khalid was successfully accepted as an undergraduate student majoring in computer science at a public university in Riyadh in 2012. His offer of admission came by members of university staff who volunteered and committed themselves to educate the teaching staff and Khalid's peers regarding his condition. An individual educational plan (IEP) was developed by the Disability Services Centre to attempt to meet his needs and to ensure that his experience at the university would be as pleasant and satisfying as possible. Khalid progressed very well, both academically and socially. Khalid graduated in 2017, and he is currently employed.

This case study illustrated that autistic adults in SA lacked services and support; the significant effort was needed to enable access to HE for Khalid.

Although this case study was unique in many aspects, it afforded me with valuable initial insights into the challenges and opportunities students on the autism spectrum face in accessing HE and led to many questions regarding the education and inclusion of 'able' students on the autism spectrum such as: What are the main challenges that autistic students in Saudi HE face? What services, if any, are available at disability services centres at Saudi colleges and universities? Also, how is the provision for autistic students presented in universities that have enrolled autistic students? Little is known about this topic in Saudi

education, and more research is needed to fill this gap in our knowledge as educators and researchers in the field.

1.3 Statement of the problem

As noted earlier. the provisions and services for autistic adults in HE have rarely been examined (Masterson and Meeks, 2014). This gap in knowledge exists internationally because autism in adulthood is a relatively new research area. It is thus essential to examine these services in order to improve inclusion practices in HE. For example, by determining the everyday discourse used by disability service centres, understanding how the provision for autistic students is presented on university websites in the UK and SA, and how disability services are organised in both countries will reveal how these services are initially experienced by students, who, like Khalid, aspire to university education but have first to negotiate institutional systems, cultures and communication practices.

At the beginning of this PhD research, my interest was focused on understanding the HE opportunities for autistic students and the challenges that they may face. Then the focus of this research changed to the staff perspective about disability services at Saudi and UK HEIs. However, both designs were not fully implemented due to a meagre questionnaire response rate and the absence of participants. The research design now utilises a single method (documentary analysis) instead of the original proposal of a mixed methods design (survey, interviews and documentary analysis). While the absence of the interview and survey data means the intention to include the perceptions of students and the providers is not now an explicit part of the study, the use of documentary analysis was redesigned and augmented to focus instead on how the provision is shared and explained and how different services and assumed needs are prioritised. Through detailed written discourse analysis, the underlying assumptions, culture and ethos of the various disability services are explored. The study assumes that, in this act of communicating a university's offer to students with autism, intentions, beliefs and values are also communicated.

1.4 Research questions

This research, therefore, investigates university websites for disability services for autistic students in HE in terms of the visibility of disability services for (potential)

autistic students, the disability discourses communicated and the organisation of disability services in the Saudi and UK HE settings.

Questions for stage one:

1. How is the provision for autistic students presented on university websites in the UK and SA (that have enrolled autistic students)?
   - How visible are the disability services?
   - What is the ease of navigation of the websites?
   - Is the presented provision generic or autism-specific?

Questions for stage two:

2. What discourse seems to be communicated on the disability services websites in the UK and SA (where autistic students are enrolled), and what kind of services seem to be available for them?
   - What messages seem to be communicated in the text?
   - What assumptions are made about autistic students and services for them?
   - What forms do the messages take?
   - What provision is available for autistic students, according to the university's website?

Questions for stage three:

3. How are disability services organised at SA and UK universities?
   - What are the similarities and differences between the two Saudi and two UK universities in terms of disability services for autistic students?
   - What influences seem to shape how disability services are organised at SA and UK universities?

1.5 Background of the study

This research focused on how colleges and universities in the UK and SA represent the support they provide to autistic students in these settings, including how these institutions portray and talk about their disability services for autistic individuals. Thus, this thesis starts

with a brief but essential discussion of the background in terms of the nature of autism and the provision of autism-related services in both the UK and SA.

1.5.1   What is autism?

Signs of autism generally appear by age three but have been observed before the first year of life (Ozand *et al*., 2003). Chown and Beavan (2011) define autism as a 'social learning disability' (477). Some researchers believe that autism is a 'social dyslexia' because it has 'disabling effects on access to social life [that] are analogous to the disabling effects of dyslexia on the ability to read and write' (Chown and Beavan, 2011: 477). The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) lists two main areas of difficulties related to autism, as follows:

- Repetitive, restricted patterns of activity and behaviour. This area also includes sensory behaviour (hypersensitivity and hyposensitivity); and
- Persistent difficulties in social interaction and communication (American Psychological Association, 2012).

DSM-V (American Psychological Association, 2012) also emphasises identifying needs during the diagnostic process. Language difficulties and social communication deficit may manifest themselves as difficulties in reading nonverbal cues, difficulties in changing the topic of conversation and talking a lot about topics of specific interest. According to Huerta *et al.* (2012), using the DSM-V criteria, fewer people will now be diagnosed with autism. In particular, the DSM-V criteria were able to identify only 91% of children who were previously diagnosed using the Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV) as having autism (Huerta *et al*., 2012). The children who lost their diagnosis under the new criteria did so mainly because their social impairment was not severe enough to meet DSM-V criteria (Huerta *et al*., 2012; NAS, 2014).

Freedman (2010) indicated that, with the intensity and right level of intervention throughout the individual's development, most HE autistic students would be able to learn to interact successfully with others. VanBergeijk, Kiln and Volkmar (2008) suggested that, in order to help autistic students succeed in post-secondary education, they need specific support and intervention, which includes planned transitions and a range of supportive and appropriate accommodations.

1.5.2 The number of disabled and autistic students in HE in SA and the UK

With regard to SA, according to Battal (2016), 'There is no data as to the number of school-age students with disabilities in SA or their distribution over the different disability categories'. Also, based on my search, there are no statistics available from the Ministry of Education in SA regarding the number of disabled students, nor the number of autistic students, attending the Saudi HE system. According to the Ministry of Education's strategic plan for students with autism spectrum disorder (ASD) (Ministry of Education, 2012), autism affects 4 to 6 out of every 1000 people (0.4–0.6%). By searching the Ministry of Education websites in 2017, and again in 2019, however, there is no information about how many autistic students attend HE.

In the UK in total, there are estimated to be around 700,000 autistic individuals (NAS, 2017). In terms of the UK HE system, the number of students who disclose their disability at the point of application is recorded by the Higher Education Statistical Agency (HESA); the total number of disabled students in 2015-16 was 197,055 from a total of 1,740,540 students, that is, 11% of students declared a disability (HESA, 2016). The total number of autistic students or students with any other specific disability is not available in the public domain (e.g., as part of the HESA website information). However, according to Martin *et al.* (2008), in 2003-04 in the UK, 80 students disclosed a disability of autism, and in 2005-06, the number had increased from 80 to 457 students. According to HESA (2015) the data show that the number of students with autism increased to 2400. 'It is likely that the real population is even more since many students do not disclose their diagnosis or see the need to do so' (Tolikas and Perepa, 2018:21).

In the UK, according to Chown and Beavan (2011), the number of young autistic people who can achieve HE levels is higher than the number who actually attend college or university; this suggests that, just as noted earlier in SA, there may be an issue in accessing HE for autistic students in the UK.

1.5.3   Autism provision in SA

Al-Fahad (2010) states that media coverage of issues around provision for autistic children in SA began in 1999 when their parents started talking to the media about the lack of services and support for themselves and their children. According to Al-Fahad (2010), a group of specialists were involved in studying autism on a national level in SA. They suggested the following recommendations for upgrading services and support for autistic people and their parents in the country (Al-Fahad, 2010):

- **First,** the importance of increasing awareness in Saudi society. This recommendation is informed by a need for early detection and intervention. Awareness campaigns have to be divided into the following levels (families, teachers, educational supervisors, schools, nurseries, kindergartens, clinics and hospitals).

- **Second,** the importance of starting training programmes at the diploma, bachelor and master levels to keep pace with the needs of human resources in various regions of the country.

- **Third,** the need for more autism studies and research in the area of diagnosis and treatment programmes.

- **Fourth,** the importance of parents' major involvement in the early intervention process (educational programmes and behaviour modification).

- **Fifth,** the need for opening new special centres and specialised programmes to deal with individuals affected by autism (educational and vocational rehabilitation).

The researcher of the current study believes that a follow-up study on a national level in SA is needed to examine the development of services and support for autistic people and their parents in the country.

In SA many treatments and interventions are implemented such as behavioural interventions, oxygen therapy, alternative communication methods, camel milk and relationship development interventions (Zeina *et al*., 2014). The range of interventions here signals a

range of different understandings as to the nature of the condition. In regards to accessing care for children and adults on the autism spectrum, availability is still limited and Zeina *et al*. (2014) propose that more needs to be done to improve services for children with developmental and psychiatric disorders.

Educational provisions in SA are also limited and less developed than services in developed countries. In regards to the private sector, there are a few centres that specialise in educating autistic children and adults in the major cities (Riyadh, Jeddah and Dammam). According to Zeina *et al*. (2014), these centres seem capable of providing appropriate education which meets the individual needs of these students. However, the main problem is that these private centres are located only in capital cities, and many children and adults on the autism spectrum around the kingdom remain excluded from services and appropriate support (Zeina *et al*., 2014).

In terms of the public sector, inadequate service provision and training are evident (Almasoud, 2010). Autistic students are 'referred to centres for these severe learning difficulties, regardless of their intellectual ability or their different needs. Also, students with high functioning autism or Asperger syndrome often remain undiagnosed because teachers are unable to recognise the symptoms of autism' (Almasoud, 2010: 3).

From 2010 until 2012, the Ministry of Education developed a strategic plan aiming to include students with mild forms of autism in mainstream schools. The researcher of the current study could not have access to a more recent strategic plan. In terms of early intervention services in SA, it is known that there are many interventions programmes for autistic children such as, Treatment and Education for Autistic and Related Communication Handicapped Children (TEACCH), Applied Behaviour Analysis (ABA), the Psycho-educational Profile Third Edition (PEP-3), one-to-one support, and Early Intensive Behavioural Intervention (EIBI) (Zeina *et al*., 2014). All of these types of intervention are available in private centres in the SA. These early intervention programmes are considered useful when it comes to developing essential skills such as adaptive behaviour, verbal and cognitive abilities, socialisation, communication, receptive language and expressive and non-verbal IQ (Zeina *et al*., 2014).

In terms of services for autistic adults, Al-Salhi (quoted in Al-Hydar, 2010) the medical director of the children's hospital at the King Fahad Medical City in Riyadh, pointed out the

growing number of cases of adolescents and adults on the autism spectrum being admitted to permanent residential care centres, especially outside the country. This situation was consiered to be due to the lack of diagnostic and treatment centres that adopt scientific, modern, standardised and high-quality programmes and methods. As quoted in Al-Salhi:

> 'The majority of autistic adults are in clinics and hospitals for [the] long term which includes adults with mild forms of autism. The reason for this is that they did not receive rehabilitation therapy during the early years of life.' (Al-Hydar, 2010: N.P.).

When they reach adulthood, the only places that can house them are mental health hospitals. Al-Salhi called for 'more efforts on the part of authorities responsible, especially concerning diagnosis and treatment' (Al-Hydar, 2010: N.P.). He indicated that 'making an effort in early diagnosis, education and early rehabilitation can help in reducing the number of adolescents who are being admitted to the permanent residential care centres' (Al-Hydar, 2010). Al-Hydar (2010) argued that investment in early intervention is much less expensive, compared to the cost of care offered in mental health and psychiatric hospitals. Al-Hydar, 2010 also suggested that scholarships were needed for doctors to specialise in paediatrics, mental health, neurology, development and children's behaviour related to autism.

Although the Saudi Ministry of Education has not yet developed an official policy and strategic plan to include and support autistic students in HE, the ministry has already done this for autistic students in primary and secondary schools. The education ministry's vision is to offer educational programmes and services that meet the complex needs of autistic students (Ministry of Education, 2012). According to the strategic plan for autism in schools, the education ministry aims to set high standards of support (Ministry of Education, 2012). To this end the Ministry of Education had the following strategic goals: First, the ministry sought to develop an educational environment for autism programmes; educational environment meaning improved access to autism programmes, improved access to early intervention programmes, the establishment of buildings suitable for autistic students, the use of technology in all educational courses and activities and increased cooperation between the family, school and community (Ministry of Education, 2012). Second, it seeks to enhance educational services for autistic students which means raising public awareness about the rights of autistic individuals, enhancing the education of gifted autistic students and, finally, improving mainstream services for students on the autism spectrum (Ministry of Education, 2012). Third, the ministry seeks to develop the professionalism of staff members working in

educational programmes for autistic learners. A more specific goal is to create enrichment programmes for teachers of autistic learners, training staff working in the field of autism, developing diagnostic tools for autistic students and developing guides for staff members who work in the field of autism (Ministry of Education, 2012). Fourth, the Ministry of Education intends to design a curriculum for autistic learners. Designing a curriculum for these learners includes benefiting from successful programmes offered elsewhere in the world to develop a local curriculum. This curriculum must be digital and interactive (Ministry of Education, 2012).

In conclusion, services and their provision appear to be more developed at the level of primary and secondary schools and less developed at the HE level. The case study of Khalid's journey as he attempted to access and entered HE provides evidence of a lack of services such as transition assistance in HE settings.

1.5.4 Autism provision in the UK

Autism provision in the UK began with activities such as advocacy at autism organisations for parents during the 1960s, which are now provided worldwide (Whitaker, 2002; Wolff, 2003). These organisations implemented evidence-based best practices at established day and residential schools for autistic children and provide information to the public and policymakers about autism and its impact on the individual (Whitaker, 2002; Wolff, 2003). Increase in autism awareness has also led to better health care education and innovative interventions; however, it has also led to the emergence of expensive and untested treatments with ineffective outcomes, such as dietary interventions, auditory therapy and facilitated communication (Howlin, 1997). According to Wolff (2003), during the 1970s and 1980s, parents expanded activities to include adults affected by autism, resulting in the closure of long-stay hospitals in the UK. The power of parents' organisations led to significant changes in the extent of services that allowed the inclusion of able individuals on the autism spectrum in the society (Wolff, 2003).

Wolff (2003) also notes that, compared to the 1960s, far more children and adults in the UK are now recognised as having autism because of increased awareness among doctors, teachers and the general public, as well as improvements in diagnostic services. Inclusion of autistic individuals in mainstream schools has increased and teachers are aware of the special needs

of autistic children (Jordan and Jones, 1999). Classrooms, Jordan and Jones (1999) argue, are now able to offer additional support for these children. Notably, many services and support programmes for autistic students have been developed in the UK not only in schools but also in HE settings. For example, HESA keeps records of the number of autistic students who enter the UK's HE system and the UK HE settings are required by law to accommodate their settings to meet the needs of students with autism (The Equality Act, 2010) (Gov.UK, 2017). Previous research has been carried out about autism in UK HE settings, including studies examining the perspectives of autistic students on services. These are discussed further in the literature review chapter.

1.6 Conclusion

There is a lack of autism studies and research in SA. Specifically, further research is needed on the inclusion of university students on the autism spectrum. Recognition of their needs is relatively limited in SA. 'Able' students are excluded from colleges and universities due to a limited understanding of their needs and a lack of assistance from disability support services offices (Almasoud, 2013). Many Saudi adults with low- and high-functioning autism are placed in hospitals, psychiatric units and institutions both in and outside SA. The Ministry of Education seems to have given little, if any, attention to expanding services in HE to support autistic students. In contrast, the UK settings are required by law to accommodate their settings to meet the needs of autistic students (The Equality Act, 2010) (Gov.UK, 2017). This research aims to examine how disability services for autistic students are represented in order to explore the extent and nature of inclusion practices in HE, for example by determining the everyday discourse portrayed by the disability services and by comparing disability services in SA to the services in the UK. The aim is to understand each within their own cultural and educational context; acknowledging that each university may not speak with a consistent voice and that each student may not seek the same support and so to contribute to a debate about how best to share information about provision with students.

The sub-aims and focuses of this study are to develop a general understanding of the accessibility of information about disability services available to autistic students and the ease of navigation to identify the types of provision for autistic students. The study also aims to understand the language that is used when communicating autism provisions and uncovering the meaning that underpins the text, for example, messages within the text, and

assumptions and beliefs present in the text. There is also a focus on discovering what provisions the universities claim to offer to autistic students. Having considered the usability and content of websites, the study also aimed to understand the factors that seem to influence the organisation of disability services and to understand differences between the UK and Saudi contexts in terms of disability services and how they are communicated to autistic students.

1.7 The use of terminology and the structure of the thesis

There are two main types of terminology used throughout this thesis: identity-first language such as 'autistic students' and 'disabled students' and person-first language, for example, 'students on the autism spectrum'. The use of terms is discussed in section 2.2.3. I have chosen to use both types of terms because they reflect the ongoing debate regarding the use of language to refer to students with disabilities and students with autism. Internationally, there is no agreement regarding the preferred terms to refer to these students (Kenny, 2015; West *et al*., 2015).

This thesis is organised into six chapters, starting with the introduction, then, secondly, with a review of the literature on university and college students with disabilities and disability services in general, and autistic students in HE and the services provided for them in these settings, in particular. In addition, there is a review of the literature in regards to disability services websites (e.g. the importance of these websites). Next, the methodology chapter presents the justifications for using the interpretive paradigm as the theoretical framework for this study. The research design is also detailed, and the use of documentary analysis in the three different stages of the research is discussed. The research ethics, sampling method, design implementation, and reflections on the design's effectiveness are all presented, in that order, in this chapter.

The fourth chapter presents the findings of the three stages of data collection and addresses the relevant research questions for each stage. The fifth chapter then discusses responses to the research questions according to the three different stages' results. Finally, the concluding chapter summarises the research findings and strengths of the research methods and offers personal reflections on the doctoral process and recommendations for further research and practice. This thesis closes with the study's contribution to knowledge.

CHAPTER 2: Literature Review

2. Introduction

This chapter presents a review of the literature that is based on the research aims. Green *et al.* (2006) argue that the most beneficial way of exploring the literature is to search the digital databases. Accordingly, research papers and books were searched over electronic databases, such as ERIC, and search engines, such as Google Scholar. Sources were also located using the library websites of the University of Exeter and King Saud University (KSU). The primary keywords used in the searches were 'disability services and HE', 'inclusion and autism', 'autism and HE', 'disability services policy and HE', 'models of disability', 'faculty and attitude', 'autism and terms', 'disclosure', 'voices and autism', 'university's websites' and 'university's websites and autism'. The reviewed materials included publications from journals, such as *Focus on Autism and Other Developmental Disabilities* and *Discourse and Society*. Books and government documents were also included in this literature review.

The chapter commences with a consideration of disability services in HE. This section includes a discussion of the nature and roles of disability services in HE. The following section focuses on the inclusion of autistic students and autism-specific provision in HE settings. Then, this chapter reviews literature about disability services: policy, practice and culture. Finally, the chapter discusses university websites (e.g. presentation, design and the accessibility of these websites for disabled students).

2.1 Disability services in HE

This section talks about the nature and role of disability services in HE in different countries including SA, USA and the UK.

2.1.1   The nature of disability services in HE

Disability services broadly focus on removing barriers to learning and enhancing students' learning and development (Cory, 2011; Hope, 2017). The breadth and nature of services vary based on financial capabilities, the organisation's philosophy and its commitment to promoting the social integration of students (Tinto, 1997; Yuen and Shaughnessy, 2002). Disability services offices are typically staffed with professional disability services staff who

may work with students with medical, physical, learning, sensory, psychiatric, cognitive and other disabilities (Wolf *et al.,* 2009). These students might need some accommodation in the environment to meet their needs.

According to Wolf *et al.* (2009), who published a book on disability services in the USA, accommodation can be defined as 'adjustment to an academic programme or environment intended to mitigate the impact of the functional limitations of a disability on participation in that environment' (Wolf *et al.,* 2009: 79). Using alternative format books, changing classrooms, enabling physical access and adjusting academic assignments are all examples of accommodations that are commonly provided for college students with disabilities (Wolf *et al.,* 2009; Hill, 1996).

In the UK, disabled students are a protected group, and discrimination against them in HE settings or any other settings is unlawful (Lukianova and Fell, 2016). HEIs are required to make reasonable adjustments for disabled students, meaning that they must adjust their assessments and teaching methods to accommodate these students. Besides, the institutions must provide information in an accessible format and assess students' individual needs to determine how best to accommodate them (Jamieson and Jamieson, 2004; Lukianova and Fell, 2016).

In terms of the nature of disability services in SA, attention has been given to students with disabilities in HEIs in SA since the 1980s (Alkhashrami, 2015). The first disability services centre in SA was established at KSU (Alkhashrami, 2015; KSU, 2018). Lack of research means that little is known about the nature of disability services in HEIs in SA as a whole; however, Alkhashrami wrote about the characteristics of disability services at KSU. KSU has a Universal Access Programme (UAP) which is designed to facilitate the access of all students to university sites, such as buildings, squares and entertainment venues. Also, the UAP supports the female and male centres of disability services at the university by providing technical assistance and technical programmes. Namely, the UAP is expected to improve the accessibility of the web for students with disabilities and ensure that all university resources are accessible for the entire student body. Professionals with graduate degrees in special education provide oversight for disability services at KSU (Alkhashrami, 2015; KSU, 2018).

One of the aims of this research was to show how different influences may impact the organisation of disability services. It is likely that any differences observed are a consequence of influences such as the culture, context and practices.

2.1.2   The role of disability services in HE

A disability services department is a resource that should help disabled students in striving toward academic and social success in HE settings (Korbel *et al.*, 2011; Russo, 2017). In addition, the role of disability services involves cross-collaboration with other offices on campus, counselling centres, health services and career services. Furthermore, the roles of disability services include those of social justice, service provider, counsellor, advocate and educator (Hope, 2017; Russo, 2017). Both Russo (2017) and Hope (2017) suggest that the roles of disability services in the USA HE tend to mainly focus on legal compliance and requesting medical documents to provide appropriate adjustments. According to Cory (2011) and Breakey (2006), another crucial role of the disability services providers in the USA and the UK HE settings is to educate faculty and staff. The education of faculty and staff is done through training and one-on-one meetings with faculty and staff members. Also, disability services providers can work with faculty to create an accessible curriculum or design cross-discipline activities for students (Kundu *et al.*, 2003; Cory, 2011). The disability services in HE can resolve issues of access as well (Cory, 2011; Lukianova and Fell, 2016). Thus, it can be seen that the role of disability services can be varied, while there is a crucial focus on academic adjustment, issues of student welfare and raising staff awareness are also seen as relevant. In managing these different components, it is likely that universities might vary.

Regardless of the quality and breadth of the disability services being offered, the process of accessing disability services starts with the disabled student. For example, in the USA, the student must disclose his or her disability to gain access (Cory, 2011). Then, the disability service providers will request third-party documentation of the disability. The documentation should provide a precise diagnosis and the functional impact of the disability on the students' activities, such as working with others to do homework, taking tests and so on (Brinckerhoff *et al.,* 2002; Shaw *et al.,* 2009; Cory, 2011). Self-disclosure is voluntary (Higbee *et al.,* 2010; Newman and Madaus, 2015; Karola *et al.,* 2016); however, without self-disclosure, no

disability services can be provided to the students, and the disability services providers have no obligation to provide support (Newman and Madaus, 2015; Karola *et al.,* 2016).

The practice in both the USA and the UK is that after obtaining an official document about the student's diagnosis, the disability services provider then has a discussion with the student regarding how the disability may have an impact on the student in the HE environment including in the classroom, the living environment (if the campus has housing) and the co-curricular environment (Jamieson and Jamieson, 2004; Wolanin and Steele, 2004; Getzel, 2005; Goode, 2007; Shaw *et al.*, 2009; Cory, 2011; Oslund, 2014;). The staff member and student should discuss the academic goals, the impact of the disability in the past and how the student would like to be supported now. Then, the staff member will verify what the student has discussed by referring to the disability documentation (Cory, 2011; Russo, 2017). The staff member can make recommendations about what reasonable accommodation is needed and inform faculty and administration (Jamieson and Jamieson, 2004; Cory, 2011; Oslund, 2014).

Moreover, in the UK in particular, the role of disability services providers includes helping disabled students in applying for and obtaining disabled students' allowance (DSA). The DSA is a grant from public funds which is provided for disabled students who attend an HE course. The DSA covers the cost of provision, services and facilities that students may need to complete their HE course (Jamieson and Jamieson, 2004; Lukianova and Fell, 2016). Besides, in the UK, faculty are expected to be aware of having to make a reasonable adjustment to accommodate the needs of disabled students. A typical university in the UK offers an advisory service for all disabled students (Lukianova and Fell, 2016).The disability advisor helps the student with all processes involved including disclosing a disability, providing documents of one's disability, arranging an assessment for study needs and applying for funding (Fitzgerald *et al*., 2003; Lukianova and Fell, 2016).

In terms of the roles of disability services in HEIs in SA, very few studies have been published to date. A notable exception, however, is Alkhashrami's 2015 work about the role of KSU in supporting disabled students at the university. According to Alkhashrami (2015), after the disclosure of the disability by the student, the disability services centre studies the eligibility of the student for disability services and locates the support needed for the student. The providers of disability services help the student understand his or her rights at the

university and assist him or her in obtaining the financial aid available for disabled students. They also help the faculty to understand the needs of disabled students, including adjustments to assignments and assessments. The disability services centre aids students with disabilities during examinations. This aid can include changing the examination's location and assigning mentors who provide writing services for disabled students. Also, the disability services centre prepares disabled students for employment and resolves any issues related to housing and accommodation (Alkhashrami, 2015; KSU, 2018). It can be concluded that, while the situation in SA is developing and still under-researched, there are many similarities between the roles disability services assume in SA and those cited as typical in the US and UK. In all countries, it is the student who makes the initial contact with the service providers, highlighting the crucial role of the website as the point of contact between service provider and service user.

This section reviewed the nature and role of general disability services in HEIs, drawing attention to the varied nature of the role and the onus being on the student to access what is on offer. The next section will focus specifically on autistic students in HE, who have their own particular set of needs.

2.2. Autistic students in HE

This section discusses the inclusion of autistic students, the autism-specific provision for autistic students and the terms used to refer to these students. These topics are relevant to the written discourse analysis and the thematic analysis that were conducted in stage two of this research which aimed to: understand the discourse that seems to be communicated on the disability services websites of UK and Saudi universities (where autistic students are enrolled); and understand what provisions are available for autistic students, according to the universities' websites. In addition, the theme 'autism-specific provision' is relevant to the content analysis conducted in stage three which aimed to understand the differences between the UK and Saudi contexts in terms of disability services for autistic students.

2.2.1. The inclusion of autistic students in HE

The inclusion of autistic students in HE, according to Ponomareva and Shapiro (2017), can be considered successful if the educational institution has a clear inclusion policy utilising a

range of tools and working on fostering a positive attitude from faculty. HE is regarded as vital for developing social skills, vocational skills, equality, independence and inclusion in society; it is also often associated with better physical and mental health outcomes and employment that leads to economic self-sufficiency (Karola *et al.,* 2016; Milesi *et al*., 2010). Thus, the benefits of HE are clear, so any disincentive for students with a disability to apply or to be successful in their application are a potential cause for concern.

Tee *et al*. (2010) suggest that reasonable accommodation should always be tailored to each student and their context. They report that disabilities service programmes in HE would be more effective if these programmes created specific services that could meet individual needs, rather than attempting to create generic disability support. A number of commentators (e.g., VanBergeijk *et al.,* 2008; Friedman *et al.,* 2013) propose that autistic students have unique needs that differ in many respects from the needs of other students with disabilities, such as those with learning disabilities. The unique needs of autistic students, it is suggested, are especially marked in the area of non-academic support, such as emotional and social support (VanBergeijk *et al.,* 2008; Barnhill, 2016). According to Glennon (2001), the overall goal of any student's university experience includes developing skills for adulthood such as identifying a vocational pathway and forming life-long relationships. However, the nature of the autism condition involves a social disability and 'the failure by universities to provide social support would substantially impair the student's ability to reach these goals' (VanBergeijk *et al.,* 2008:1362). In addition, social and emotional support are both critical for academic success and for meeting the needs of autistic students (VanBergeijk *et al.,* 2008; Barnhill, 2016).

As indicated above, one role of disability services is to consider reasonable adjustments, and the literature indicates that adjustments for autistic students should reflect their very particular set of needs. Ravet (2011) claims that there are two contradictory perspectives within the inclusion literature. Although it refers to schools, this discussion can be applied to HE settings. These perspectives shape attitudes and perceptions towards students with autism, and 'have an impact on how their inclusion is specifically enacted in schools and classrooms' (Ravet, 2011: 668). The first perspective is 'rights-based' inclusive practices. This perspective argues for an end to all educational segregation, calling for inclusion in mainstream settings for all students. The second perspective is 'needs-based' and emphasises the lack of research evidence in support of inclusion, drawing attention to the danger of

exclusion, which can arise from inclusion. The educational provisions in the needs-based perspective aim to meet the distinctive needs of different groups of students. In addition, this perspective prioritises the need for additional support for learners with disabilities. This is an indicator that there is no coherent, single inclusion discourse, which leads to inconsistency in inclusive practices, such as the argument around medical labelling. The needs-based framework supports identity-first language (e.g., autistic students) because it identifies the kind of impairment and the need associated with it, whereas the rights-based framework supports person-first language (e.g., students with autism) because proponents believe it avoids negative judgments that come from drawing attention to the person's deficit. They believe in ability and potential, and reject medical categories.

The inclusion debate is ongoing, and many perspectives and voices fill the space in between - some argue for labelling and diagnosis, some for no diagnosis, some for common inclusion pedagogy, some for special pedagogies, some for autism-specific provision, and some for generic disability provision. Regardless of the debate around inclusion in general and autistic students in particular, there is little or no literature regarding how universities and disability services in universities communicate their inclusion perspectives to autistic students. Thus, the present study addresses this area.

The next section will discuss the frequently-mentioned services for autistic students in HE.

2.2.2. Services for autistic students in HE

It is suggested that students with learning disabilities are more likely to be supported appropriately when compared with autistic students (VanBergeijk *et al.,* 2008; White *et al.,* 2011). The difficulties in addressing the needs of autistic students in HE settings is arguably because of the heterogeneity of autistic students and the invisibility of their disability. The literature suggests that autistic students face challenges in disclosure, time management, processing information, social relationships, unexpected changes in new situations and sensory overload (Madriaga, 2010; Cullen, 2015; Van Hees *et al.,* 2015). Understanding the specific challenges autistic students face, however, and which services are appropriate is still considered to be a challenge for HEIs (Van Hees *et al.,* 2015; Barnhill, 2016). Nevertheless, it is worth mentioning that success in HE for autistic students is more likely when support is frequent, consistent and flexible (Knott and Taylor, 2014; Cai and Richdale, 2015).

The following services will be discussed in this section: social and behavioural support, peer mentors, mental health support, transition and academic support. The literature review focuses on these services because they are most frequently mentioned in the literature related to support for autistic students.

2.2.2.1. Social and behavioural support

For autistic students, the social skills they need can be taught in different ways: for example, through role-playing and the use of social scripts, the student can practise responding to typical situations and conversations (Masterson and Meeks, 2014). Some autistic students have difficulties regarding facial recognition and memory. Masterson and Meeks (2014) suggest that students could receive photographs of relevant staff and faculty (available electronically on most college or university websites), along with office hours and contact information. Then, the student could store these photographs for quick reference in either a laptop computer or smartphone. This method, Masterson and Meeks (2014) suggests, will work as a visual reminder for the student and will help in minimising anxiety and stress and avoiding social awkwardness.

In a study conducted by Jantz (2011) with 35 adults with Asperger's syndrome, who were highly educated but unemployed, (24 male and 11 female; ages 24–77), the participants suffered from loneliness. Jantz (2011) investigated their experiences with joining social groups, and the participants described their experiences as positive, finding support groups beneficial when the groups utilised 1) interaction and social skills, 2) structure and 3) advice and information. Support groups are thus considered to be useful and a suitable means for reducing loneliness and maximising social interaction for autistic adults.

Such social-behavioural support may help students' success in HE. According to a study conducted by Butler and Gillis (2011), university peers view autistic students as different not because of their label, but because of the behaviours associated with the disorder. Autistic students may need to acquire many skills, such as public speaking, working with others and working cooperatively on group projects, and behaving appropriately in class. These skills are also crucial for successful employment (Dillon, 2007; Zeedyk *et al.*, 2014). Some authors suggest that a support group (consisting of peers on the autism spectrum) could be

established at the university campus (Dillon, 2007; Zeedyk, *et al*., 2014); this group could help the students gain social skills and reduce co-morbid conditions, such as anxiety and depression (Dillon, 2007; Zeedyk, *et al*., 2014). Sarrett (2018) found that autistic students recommended that social groups be organised around the interests of the group members. For example, the group members could nominate the events or activities to ensure they are of interest to everyone.

2.2.2.2. Peer mentors

According to Hart *et al.* (2010), a mentor is someone who knows the student's strengths and challenges and uses that information to provide individualised support in an academic environment. He or she can interpret materials and instructions to the student and explain expected behaviour (Hart *et al.,* 2010).

Hurewitz and Berger (2008) and Zeedyk, *et al*. (2014) suggest that the most challenging aspect of college attendance for a learner on the autism spectrum is the social environment. Peer mentors are, therefore, considered to be necessary as they can offer help in challenging social situations, increase the student's circle of friends and be a model for appropriate social behaviour (Hart *et al.,* 2010; Knott and Taylor, 2014). In terms of social support, mentors can accompany students on planned social events, such as sporting activities, dinners and movie trips, to help them practise social skills. Mentors can model the desired behaviour for students and can be a good source of advocacy for autistic students. With appropriate education and training, undergraduate students can be good mentors (Hart *et al.,* 2010). Mentoring is not only beneficial for autistic students but also their mentoring peers (Hart *et al.,* 2010). Mahoney (2007) found that positive interactions with autistic students can increase positive attitudes toward them.

2.2.2.3. Mental health support

Counselling staff can guide the faculty about the needs of a specific student or provide general advice about issues that are relevant to autism. Counselling staff can also help in emergencies or if there are escalating mental-health issues sometimes associated with autism, though counselling staff do not replace the role of a primary mental health care team (Masterson and Meeks, 2014), However, counselling staff members are the most needed

during the transition from secondary school to HE (Wolf *et al.,* 2009). During this time, students may experience difficulties with mood, depression and anxiety, and these emotional difficulties may also continue throughout the first semester. Therefore, students may need additional emotional and psychological support (MacLeod and Green, 2009; Masterson and Meeks, 2014).

Masterson and Meeks (2014) indicated that colleges and universities in the USA with access to specialists in the field or large research hospitals are ideal for autistic students; these HE settings can provide specialists, additional support to students and, potentially, research participation opportunities and support groups. Masterson and Meeks (2014) concluded their article by pointing out that an increase is expected in the number of autistic students who attend college and university in the USA. Therefore, to make these students' experiences more pleasant, disability professionals must work collectively with autistic students, faculty, staff and key administration (MacLeod and Green, 2009; Masterson and Meeks, 2014)

2.2.2.4. Transition support

Transition to tertiary education poses challenges for any student but for autistic students the challenges can be daunting and they may require training in specific skills to overcome challenges in HE settings (Kuder and Accardo, 2018). Unfamiliar and large environments such as a university, for example, can be overwhelming for autistic students (Masterson and Meeks, 2014; Van Hees *et al.,* 2015). It is recommended that the transition to HE start during the summer months when the staff members have more open schedules, and there are fewer crowds. This transition support is considered to be essential because it will allow the student to start coursework in September or October with more confidence and experience (Adreon and Durocher, 2007; Masterson and Meeks, 2014). Shmulsky *et al*. (2015) found that by training autistic students on acquiring a number of skills, such as social skills, 27 students out of 30 were able to successfully complete their first year in college.

Autistic students are advised to use visual reminders or campus maps to highlight routes to and from classes to reduce anxiety. Critical areas that need highlighting, it is suggested, are the student support office, counselling centre, toilets and places where the student can de-stress and reduce stimulation, such as the library or reading rooms (Glennon, 2001;

Masterson and Meeks, 2014). It is worth mentioning that students who receive transition services are more likely to receive disability services in HE (Lightner *et al.*, 2012; Newman and Madaus, 2015). Transition planning activities could directly enhance the student's realisation of the impact of their disabilities on their learning. Also, transition planning activities could provide the disabled student with knowledge of potentially valuable service at HE settings (Lightner *et al.*, 2012; Newman and Madaus, 2015).

2.2.2.5. Academic support

Research from Australia revealed that educational needs are more likely to be met than the social needs of autistic students (Cai and Richdale, 2016). For example, Cai and Richdale (2016) conducted their research with 23 autistic students enrolled in six HEIs in Australia, and 15 family members were participants in 15 semi-structured focus groups; the authors found that most students (63.6%) reported that they were supported academically; however, only some (27.3%) were supported socially.

The educational support for students on the autism spectrum is similar in some ways to the support for other disabilities. Similar support includes a note-taker, tape-recorded lectures, sitting in a quiet place for the examination and being in an environment that considers the student's sensory needs. In terms of the differences and additional academic services, the student may need 'flexibility in scheduling classes', 'flexibility in assignment due dates', 'oral rather than written exams' and replacing group projects with individual projects (Adreon and Durocher, 2007: 276). Students also will need extra support in planning for their studies and organisation and study skills (Adreon and Durocher, 2007; Sayman, 2015).

In conclusion, as mentioned previously, there seems to be a need for more research about useful support for students with autism in HE settings. This section has described the most frequently mentioned support that researchers claim is beneficial for autistic students, including social and behavioural support, peer mentors, mental health support, transition and academic support. The next section will present the literature review in regards to terminology and autism.

2.2.3. Terminology and autism

The American Psychological Association's Guidelines for Assessment of and Intervention with Persons with Disabilities (American Psychological Association, 2012) suggests that using person-first language (e.g. student with autism) is the most appropriate use of terminology. At the same time, the American Psychological Association acknowledges that some individuals with disabilities and other organisations prefer an alternative use of terminology, such as identity-first language (e.g autistic students). People who adopt person-first language claim that it reduces the stigma, prejudice, negative attitudes and stereotyping toward people with disabilities; they also claim that it encourages understanding, openness and positive attitudes (American Psychological Association, 2012; Dunn and Andrews, 2015).

The use of person-first language is common in the USA and among psychologists, and it is underpinned by the social model of disability. On the other hand, the use of identity-first language (e.g. autistic student), it is claimed, sees disability as a neutral characteristic and human attribute (Olkin and Pledger, 2003; Dunn and Andrews, 2015). There is a dilemma between the two types of terminology (person-first language and identity-first language) because these terms affect how people view disability based on the assumptions and beliefs that are manifested in the language used. One way forward is to ask people how they wish to be referred to; it is expected that when using such an approach, the preferences will vary among individuals and groups. Attention to these details (asking people how they wish to be referred to) promotes both sensitivity and accuracy in daily discourse and the spoken and written language (American Psychological Association, 2010; Dunn and Andrews, 2015). However, the use of language is inconsistent in practice and in the literature (Equality Challenge Unit, 2006; Prowse, 2009).

The use of language also relates to how people view a person's disability. Sometimes, people with disabilities are seen as recipients of medical treatment. For example, in the media, such as newspaper articles, people with disabilities are often identified as 'suffering from', 'sick with', 'cases', 'patients' and 'affected by'. 'Whatever the social situation, persons with disabilities are often viewed as the primary object of medical treatment' (Longmore, 1985: 420). In the use of such language utilising the 'sick role', individuals with disabilities are expected to receive treatment and surrender control of their lives to professionals. The

problem with using medical terms to label disabilities is that it puts the individual into the position of needing a cure for a condition that is often incurable, which increases helplessness and dependence (Longmore, 1985; Broderick and Ne'eman, 2008). The other set of terms sees people with disabilities as 'people with special needs', 'special' 'atypical', exceptional' and 'people with exceptionalities' (Longmore, 1985: 421). Such terminology emphasises the notion that individuals with disabilities need professional treatment, assistance and supervision. Although this terminology tries to get around the effects of medical labelling, it has 'the unintended effect of reinforcing the perception of the essential differentness of the disabled person' (Longmore, 1985: 421).

In terms of the autism label, it is often regarded as essential for the individual and service providers because it enables them to make sense of the condition, adapt to it, cope with it and identify the challenges and strengths associated with it (Jones *et al*., 2008; Ravet, 2011). The autism label is also vital because it allows access to different kinds of support from a variety of agencies. As previously noted, these services and support might include financial support, adjustments to the learning environment and interventions to meet the individual's special needs. Labelling is also important because it leads to legal protection under disability laws (Ho, 2004; Ravet, 2011). Labelling can be both exclusionary and inclusionary; here exclusionary because it affirms differences, which might lead to marginalisation, and inclusionary because it identifies needs and help in meeting them (Dyson, 2001; Ravet, 2011).

Autism touches people's lives in different ways; some experience it in the community through friends and family, and some experience it as caregivers or personally. This is one of the reasons behind the variety of terms in the language used to describe autism. Also, there is a debate regarding how best to conceptualise autism in the scientific community (Kenny *et al.*, 2016). In the literature, autistic individuals are described as individuals arriving from a different space or withdrawing or retreating into a 'shell' or 'behind a 'wall'. These descriptions have been used by both parents and autistic individuals (Maurice, 1993; Broderick and Ne'eman, 2008). In line with this, the language used to describe their autism as an 'alien imagery' is an indicator of social isolation and discrimination: '[The] alien metaphor has been increasingly rejected' (Broderick and Ne'eman, 2008: 465), and this rejection came from advocacy from the autism community (Broderick and Ne'eman, 2008).

Some authors suggest that there is a strong ethical imperative to avoid the use of identity-first language such as 'autistic' or 'autistic individuals' (Ho, 2004; Ravet, 2011). These terms might be considered disrespectful, and it is suggested that using person-first language, terms such as 'person with autism', which dissociates the condition from identity or personhood, is preferred. On the other hand, some researchers argue that the use of the word 'autistic' to describe individuals with autism might be useful because it can affirm who they are and what kind of disability they have, challenging the connotation that autism has a shameful notion. Also, some individuals who are diagnosed with autism stress that they are proud to be autistic (Cigman, 2007; Ravet, 2011). According to Autism Speaks (2016), many individuals diagnosed with Asperger's syndrome still use the Asperger's syndrome label even though it was removed from the DSM-V; these individuals believe it is part of their identity or may reflect a peer group with whom they identify. The language of disability is not only a debate among professionals, but also, people with disabilities discuss preferable terms of identification (Longmore, 1985; Autism Speaks, 2016).

In the UK, the labelling of autistic students is also influenced by the language used by HE bodies, such as HESA and the Universities and Colleges Admission Services (UCAS). UCAS refers to autism as autistic spectrum disorder or Asperger's syndrome. In 2003, HESA began to distinguish students with autism and Asperger's syndrome from other disabled students. Such distinctions have intensified the discussion around the inclusion of these students (Martin *et al.*, 2008). There is little research, if any, that addresses how universities in SA and the UK use the autism terminology when they communicate with autistic students in HE. Therefore, one of the aims of this research is to identify the terms, and possible accompanying implications, used by disability services in HE websites to refer to autistic students.

As mentioned in chapter one, identity-first and person-first language are both in use in this thesis because this reflects the ongoing debate regarding the use of language to refer to students with disabilities and autistic students. The next two sections will discuss the nature of autism services and support in UK and Saudi HEIs.

2.3 The nature of services and support for students with autism in UK HEIs

In the past, few autistic students attended HEIs in the UK. However, the number of these students who are in universities and colleges has grown (Taylor, 2005). In the 1990s the majority of the UK colleges and universities offered little systematic support to disabled students including those with autism (Goode, 2007). Subsequently, a series of legislative changes, individual development projects and funding initiatives occurred including the requirement on universities and college to detail their provision by publishing a 'Disability Statement', appointing disability coordinators who work in supporting disabled students and financial aid in the form of a Disabled Student's Allowance (DSA) (Tinklin and Hall, 1999; Goode, 2007). However, Goode (2007) argues that universities and colleges have been hampered by under-resourcing of disability specialists, lack of senior management support, and lack of understanding in relation to specific disabilities. Nevertheless, Goode (2007) suggests that signs of improvement in including disabled students in the UK further and higher education can be noted including, for example, the effects of developing legislation and the expansion of disability services (Goode, 2007).

Services for autistic students in the UK start before the students enter HE (via transition services) (Mandy *et al.*, 2016) or when they disclose their disability in HE settings (Oslund, 2014). As mentioned previously, autistic students and disabled students in general, are provided with financial aid in the UK, which is known as Disabled Student's Allowance (DSA). Eligibility for the DSA depends on the student's individual needs, not on a student's household income. It can be claimed by part-time and full-time students, and it does not need to be repaid like a loan. It can be used to cover the cost of expenses, such as a new computer, non-medical helper services and specialist equipment (Lukianova and Fell, 2016).

Services for autistic students in the UK might be generic disability support or specific (Van Hees *et al.,* 2015; Karola *et al.*, 2016; Chown *et al.*, 2018). In terms of generic disability support, for example, a typical university in the UK, as previously mentioned, has advisory services where disabled students, including those with autism, can access support. For example, the disability advisory services at the University of Oxford includes assigning a member of staff from disability services at the university to coordinate support and advice for the disabled student (University of Oxford, 2019). One example of specific services for

students with autism is the establishment of Ambitious College in London in September 2014 on the campus of Brent and Southgate College. The curriculum here is highly personalized (Karola *et al.*, 2016).

2.4 The nature of autism services and support in Saudi HEIs

To my knowledge, no study has investigated the nature of autism services and support in Saudi HEIs. However, there is a guide for policies and procedures at KSU (KSU, 2013). According to my knowledge, it is the first university to include formally diagnosed autistic students in SA. According to this guide, in order to consider students eligible for autism services, the students have to prove that they received disability services and support during secondary school by providing their individual educational plan. Additionally, they may have to provide evidence of their disability from an authorised body. The nature of autism services in this university supports faculty by providing autism training, providing academic support (i.e. academic advising) and social support.

The focus of the next section will be on policy, practice and culture around disability services. This section of the literature review has a link to the thematic analysis in the third stage of this research which investigated the influences that might shape the organisation of disability services of universities in SA and the UK.

2.5 Disability services: policy, practice and culture that might influence the organisation of and access to disability services in HE

So far, the literature review has considered how disability services in HE address the perceived needs of disabled students in general and autistic students in particular with the emphasis very much on need and provision. The websites at the heart of this study, however, are not merely a list of what is on offer, they reflect the beliefs, attitudes and philosophies of these services as they have developed over time and in response to particular policies and social circumstances. This section discusses the influences that might shape the nature of disability services, such as disability policies, disability models, faculties' attitudes and disclosure of disability. There is little research that investigates the influences that might shape the organisation of disability services in the UK and Saudi HEIs. Therefore, it is

essential to review the literature to understand the possible influences before considering the current study.

2.5.1. Policies for students with disabilities and autistic students in the UK and SA

Legislation addressing the education of disabled students has encouraged the educational participation of students with disabilities in many countries around the world (e.g. Lewis *et al.,* 2012; Tee and Cowen, 2012). Therefore, national policies can be considered an influence that might shape the nature of disability services. This section discusses the policies in the UK and SA for disabled students and autistic students in HE settings.

2.5.1.1. Disability policies in the UK

Over the last couple of decades in the UK, there have been changes in policies related to the education of students with disabilities. According to Tee and Cowen (2012) and Oliver (1994), in the past, political approaches focused on compensation and care. Nowadays, the focus is on inclusion and equality, and HEIs are required by the Equality Act (2010) to adjust and accommodate their systems to meet the needs of students with disabilities to achieve equal access to learning and teaching opportunities.

Although there was an increase in the number of students with disabilities who attended HE in the early 1990s, their feelings of belonging did not increase (Beauchamp-Pryor, 2011). Many students reported that they felt unwanted and isolated from their peers in HE settings (Beauchamp-Pryor, 2011). They also reported many barriers to obtaining their education, such as organisational, institutional and environmental barriers (Beauchamp-Pryor, 2004, 2011). The Disability Discrimination Act was passed in 1995. However, it did not include HE settings in its provision. Eventually, the lack of provision and policies for HE students with disabilities began to be recognised by policymakers. In 2001, a new law was implemented: the Special Educational Needs and Disability Act (Fuller *et al.*, 2004a, 2004b). This law obliged HEIs to provide reasonable adjustments for students with disabilities, which affected the learning, assessment and teaching of students with disabilities in HE settings. SENDA encouraged colleges and universities to adopt a more strategic plan toward identifying reasonable accommodation in their assessment, teaching and learning practices and policies (Fuller *et al.*, 2004a, 2004b).

The most recent relevant legislation in the UK is the Equality Act 2010, which is a result of the campaigns of human rights organisations and equality advocates (Hepple, 2010; Lewis *et al.,* 2012). In this act, as in previous legislation, disability is defined as 'a physical or mental impairment that has substantial and long-term negative effects' on the person's 'ability to do normal daily activities' (Gov.UK, 2017). The Equality Act, like anti-discrimination legislation, was designed to protect individuals from discrimination that is based on several different characteristics, including their disabilities. The Equality Act is a move away from the medical model of disability (e.g., labelling) to the social model, such as acknowledging social barriers and discrimination (Hepple, 2010; Lewis *et al.,* 2012). These models will be discussed in detail in the next section. According to Lewis, Hammond and Horvers (2012) and Hepple (2010), the implementation of the Equality Act may increase educational opportunities because it makes institutions respond more inclusively, and developing inclusive culture in HEIs means that the traditional institutional structure is challenged.

The Autism Act (2009) 'was the first disability-specific law and introduced a legal duty for the government to create a strategy for autistic adults and local authorities to implement the strategy' (Watts, 2017:187). Under this law, health and social care organisations are required to provide all staff members with statutory training in autism. Also, they are required to provide an assessment of the autistic individuals' needs that should accompany their diagnosis of autism, a provision of a statement of an autism condition to autistic children and giving autistic adults a transition plan and, finally, involving autistic adults in local services planning (Department of Health, 2010; Watts, 2017). The Autism Act (2009) also protects the rights of autistic adults in HE settings.

2.5.1.2. Disability policies in SA

The establishment of a specific law by the Saudi government came in 2000 as a piece of legislation called the Disability Law (Ministry of Education, 2002; Battal, 2016). The law ensures that everyone with a disability has access to free rehabilitation and appropriate mental health and education services; the law also states that public agencies should be accessible to those individuals who need them and should provide specialised services to individuals with disabilities (Aldabas, 2015; Battal, 2016).

In the USA, the 2001 Regulations of Special Education Programs and Institutes is a law that was created after reviewing the USA's special education policies, including the Individuals with Disabilities Education Act (IDEA) of 1990 and the Education for All Handicapped Children Act (EHA) of 1975 (Alquraini, 2010; Murry and Alqahtani, 2015). RSEPI includes procedures for evaluating and assessing students to determine their eligibility for special education services, guaranteeing appropriate and free education for all children with disabilities, including a guaranteed individual education programme (IEP), related services, early intervention programmes and transition services (Alquraini, 2010; Murry and Alqahtani, 2015). According to Alquraini (2010), in actuality, these policies and pieces of legislation are not enforced in SA, despite the laws having been passed in 2000 and 2001.

In terms of laws that protect the rights of children and adults, the Care for Disabled System 2000, which was established by Royal Decree No. (M/37) of 11 December 2000, is a law that protects the rights of all disabled individuals, including university and college students. Also, SA is a signatory to the United Nations Convention on the Rights of Persons with Disabilities, which was applied on 3 May 2008 and that stipulates that accessibility is a human right (UN, 2018).

The next section will discuss models of disability (the medical, social and universal models) which might underpin the design and organisation of disability services in HE settings and might be a factor influencing the organisation of these services.

2.5.2. Models of disability

For decades, social scientists have found the concept of disability puzzling and have struggled to find operational definitions of disability that are global, complete and stable over time. The concept of disability can be understood in many ways, and sometimes these definitions are contradictory (Grönvik, 2009). Traditionally, disability has been viewed through a medical lens: 'Disability has been narrowly equated with an individual's health status, impairment or capacity limitation' (Officer and Groce, 2009: 1795), but the medical model fails to recognise social factors that prevent full participation in society by the disabled. Viewing disability as a social issue involves addressing and removing barriers and providing more opportunities. According to Harris (2000), Guzman (2009) and Guzman and Balcazar (2010), there are three different frameworks, or models, of disability that are used

within disability services in HE: 1) the medical model or the individual model, (2) the social model and (3) the universal model. The following is a review of the literature about each of these models.

The medical model of disability has dominated disability discourse in the USA (Areheart, 2008). The medical model is 'a model that focuses on the disadvantageous impact of physical or mental impairment rather than that of the environment in which they operate' (Samaha, 2007: 1256). It views disabled people as individuals in need of care in order to resolve the legal and social issues and obstacles that people with disabilities face (Areheart, 2008; Alsharif, 2019). It developed into the concept of the 'rehabilitation role', where disabled persons are expected to achieve 'normality' by making the most of their abilities (Dewsbury, 2004).

Autism is a medical diagnosis; therefore, it has been, and still is, treated and understood through the medical model of disability. The medical model of disability views disability as a physical, sensory or intellectual deficit. From this perspective, autism or any other disability is seen as a problem within the individual that needs to be treated (Breakey, 2006; Areheart, 2008). The medical model also means that the treatment and solution are perceived to be located within the disabled person. A drawback of the medical model is that it does not seek a solution beyond the disabled person, failing to address the social barriers that disabled people face (Breakey, 2006). The medical model is also criticised for how it considers disabled people as people who cannot participate fully in society and have attributes like incapacity and dependency (Areheart,2008), thus perpetuating disability as a 'deficit' identity.

On the other hand, the social model of disability is a model that 'relates a person's disadvantage to the combination of personal traits and social setting' (Samaha, 2007:1251). In education, the social model of disability shifts the focus away from the students to how curricular practices, teaching and the environment might be problematic for some students. It focuses on what is wrong in the socially constructed environment and attitudes (Ravet, 2011). This framework is based on the belief that individual traits will be less disabling if the social setting is revised and that 'some impairments are disadvantageous only because of their interaction with a social setting' (Samaha, 2007:1257). According to Samaha (2007), in the UK, the impact of the social model on law, politics and academics has been apparent since the 1970s.

The social model of disability represents the day-to-day experiences of people with disabilities and was taken up and articulated by disabled people (Fuller *et al*., 2004b; Samaha, 2007). It is claimed that, to include people with disability, how society is organised must be changed. People with disabilities face cultural, economic and environmental barriers, such as inaccessible education, negative images in the media, inaccessible buildings and transport, discrimination, lack of health and social support and inadequate disability benefits (Breakey, 2006; Samaha, 2007). By requiring members of society to be responsible for breaking these barriers, people's attitudes can be changed.

The main criticism of the social model is that it indicates that a disability could be eradicated if changes were made to the person's environment. It does not consider the possible limitations caused by the person's impairment (Samaha, 2007; Alsharif, 2019). It is not always possible to break the social barriers for autistic people because of the natural characteristics of the condition. However, this model's strength is that it considers the individual to be the expert on his or her requirements, whether the individual has a visible or hidden disability (Breakey, 2006).

The social model proposes that autism traits are not disadvantageous on their own; instead, the social setting triggers the disability. Thus, by creating a friendly environment and social support network, students with high-functioning autism may be able to succeed in educational settings. With appropriate services, the needs of these students can be met in natural settings, which is shown by the fact that many autistic students have graduated from HE settings (Jamieson and Jamieson, 2004; Wolf, Brown and Bork, 2009).

The universal model focuses on the design of disability services and how to make the environment inclusive and accessible to the largest number of people possible (Preiser and Ostroff, 2001; Friedman, 2016). Universal design also means including a wide range of student perspectives (Higbee *et al.,* 2010). It does not refer only to the accessibility of physical spaces, but also includes the accessibility of the academic programmes and curricula. Universal design has the additional aim of actively reducing segregation for disabled students within the university both academically and socially. For example, some disabled students require extra time for examinations as a necessary accommodation, so if an examination is not timed, the instructor can be flexible and give all students extended time

which means the needs of disabled students are met, and they are not being segregated from their peers. Besides, the extended time can help other students who are not native speakers of the language, and the extended time can also help students with test anxiety; thus, universal design can benefit students both with and without disabilities (Pallas, 1993; Parker and Szymanski, 1998; Higbee *et al.,* 2010).

Universal design is the primary theoretical foundation of universal design for instruction (UDI) (Embry *et al.*, 2005). UDI is 'a method of instruction that would meet the needs of all students, including addressing many of the accommodation requirements of students with disabilities, as well as considering the diverse learning styles of developmental education students' (Kalivoda, 2003).

When comparing the medical model to the social model, those working within the medical model argue strongly that specialised training in the field of autism is essential to work effectively with an autistic learner and meet his or her unique needs. On the other hand, those who believe in the social model argue that the needs associated with the learner are shared by other learners who have difficulties but who are not on the autism spectrum, such as learners with communication difficulties (Davis and Florian, 2004; Jones *et al*, 2008; Ravet, 2011).

The medical model is the most common model used within disability services (Guzman, 2009; Guzman and Balcazar, 2010). However, when the providers of disability services were asked to rank some of their beliefs and approaches, it has been found that these providers have more of a hybrid model approach that mixes the social, universal and medical models (Friedman, 2016). Within the HE context, providing individualised accommodations to a student with disabilities, such as extending testing time, is viewed as adopting the medical model of disability; the students who are given extended time to take the test are experiencing distraction during these examinations (Friedman, 2016). Providing support that can reduce social barriers, such as negative attitudes, by creating awareness and professional development sessions mean that the providers of disability services are adopting the social model. Taking a proactive approach in providing accommodation, such as adjustable tables and ensuring that seamless access is available, means that the universal model is adopted (Higbee *et al.,* 2010; Friedman, 2016). Finally, the hybrid model means that the college or university adopts aspects from the previous models, a combination of the social, individual and universal models (Friedman, 2016).

Consciously or unconsciously, these three models that position disability in different ways are still visible in the way disability is talked about and discussed and are likely visible in the means by which support is communicated, namely through the university websites for disabled users. The first encounter with a university's disability services is likely to be the website, so the tone, voice and implicit assumptions revealed here may well be the key to initiating a relationship with students or even instrumental in discouraging their engagement.

2.5.3. Faculty's attitudes

The success or failure of students with disabilities in a HE setting is, according to Sachs and Schreuer (2011), influenced by the faculty members' attitudes toward students with disabilities and their awareness of these students' special needs and knowledge of how to make reasonable adjustments. The negative attitudes of administrative staff and faculty may prevent students with disabilities, especially students with invisible disabilities such as autism, from disclosing their special needs and from requesting the reasonable accommodations they are entitled to (Jung, 2003; Sachs and Schreuer, 2011).

Faculty's negative attitudes toward students with disabilities can be improved (Gaddy, 2016). It is essential to reassure faculty that providing accommodations to disabled students does not alter academic standards or processes (Gaddy, 2016). According to findings by Sniatecki, Perry and Snell (2015), faculty members generally have more positive attitudes toward students with physical disabilities and the most negative attitudes for students with mental health disabilities and learning disabilities, meaning that autistic students face more attitudinal barriers because autism is often associated with mental health problems and learning disabilities. Thus, disability services and support are likely to be required to address such barriers (Lombardi *et al.,* 2011; Sniatecki *et al.,* 2015).

Certain variables can be linked to the faculty's willingness to make reasonable adjustments; educational researchers, including Leyser *et al.* (1998), have found this link. The variables include gender (men expressed less positive attitudes toward learners with disabilities than women), information (those who knew less about disabilities had less positive attitudes than those who knew more) and academic field (faculty members in the business and social sciences were found to have less positive attitudes toward individuals with disabilities than

education faculty). Finally, researchers have found that personal experience influences how willing educators are to make accommodations; that is, those who have had less contact with students with disabilities tend to express less positive attitudes and be less comfortable in making allowances than those who have had more experience (Leyser *et al.*, 1998; Scott and Gregg, 2000). Among the implications of these findings for training and student support is that the teaching staff in the business and social sciences departments are likely to need more training than education faculty. Also, it seems that the more information and experience an educator has, the more tolerant he or she will be with students with disabilities. Untrained faculty is a factor that might delay or prevent a student from accessing disability services. Some researchers find that some students avoid self-disclosing due to fear of a professor's attitude, discrimination or stigma (Kurth and Mellard, 2006; Martin, 2010; Newman and Madaus, 2015).

2.5.4. Disclosure of disability

Disclosure of disability is a significant factor associated with accessing disability services because, if students refuse to disclose or delay, this can cause absent or inappropriate support, a potential barrier to learning, academic failure or crisis (Lynch and Gussel, 1996; Storr *et al.,* 2011). 'In effective disclosure, it is important first to establish oneself as a qualified person, rather than focusing on the disability' (Lynch and Gussel, 1996: 353). As mentioned, there is no legal obligation in the USA for the disabled student to disclose his or her disability (e.g. Barnard-Brak *et al.,* 2010; Storr *et al.,* 2011). In SA, there is a lack of studies that discuss the matter of disclosing disability; however, from personal experience, SA practice is not different from the USA practice. Disability disclosure is voluntary for students with disabilities. Disclosure of a disability is also voluntary in the UK (Jamieson and Jamison, 2004; Oslund, 2014). In the UK, Bell *et al*. (2017) found that autistic students struggled with the whole process of disclosing their disability in order to receive services. For example, in Bell, *et al*.'s (2017) research, students with autism in the UK reported that their parents' engagement was necessary to initiate involvement with HE services. Although these students are adults, this struggle to independently connect with support provides a strong argument for disability services providers to be willing to engage with parents to initiate the process of support. On the other hand, a student's decision not to disclose autism must be respected, and the provider of disability services has to be flexible in order to offer services when a student struggles at whatever stage of the academic year (Bell *et al*., 2017).

Social comfort, degree of stigma perceived and harm or benefit anticipated are all factors that might influence the disclosure of a hidden disability (such as autism) (Braithwaite, 1991; Lynch and Gussel, 1996). The way students construct their identity as disabled individuals plays a fundamental role in disclosing (Storr *et al.,* 2011). Some students find declaring the disability essential for gaining better access to support. However, on the other hand, students who do not disclose may preserve a sense of autonomy (Kolanko, 2003; Storr *et al.,* 2011). Although disclosure is a student's choice, creating an environment of honesty, openness and trust can foster disclosure and minimise hurt for students (Storr *et al.,* 2011).

There are various benefits and costs associated with disclosure of disability (Smart, 1999; Corrigan and Matthews, 2003). Disclosing information about a disability is often an emotional process. For some students, it might be comfortable and therapeutic, or it might be an intimidating or awkward experience (Barnard-Brak *et al.,* 2010). The culture of the disability service provider is key to creating a context in which disclosure is eased. The role of the website in communicating this culture is therefore crucial. There are some benefits of disability disclosure though, for example, the resulting accommodation might also benefit other students in the class (e.g., the instructor uses a microphone to help a student with hearing difficulties), which is an aspect of universal accessibility (Lynch and Gussel, 1996; Higbee *et al.,* 2010). Another benefit is that disclosure can remove the stress associated with hiding an invisible disability. The student can then concentrate much better on the class work (Lynch and Gussel, 1996).

In conclusion, this section has examined a number of factors that would seem to influence the nature and organisation of disability services as discussed in the literature such as disability policies, models of disability, faculty's attitudes, and the disclosure of disability. If disability services reflect these contextual and social influences, then they are likely to be visible on the website. There might be other factors influencing the organisation and nature of disability services. Therefore, the third stage of this research investigated how policy, social and cultural factors might be visible on the website by using thematic analysis to analyse disability services websites and relevant documents from these disability services. The aim was to be aware of both anticipated and unanticipated factors.

2.5.5. Autistic students' voices

There is, in the literature, research that draws attention to autistic students' voices in stating their views about the quality and relevance of the services they access. For example, Cai and Richdale (2015) report that autistic students in their study in Australia view the disability services and support offered to them to be wide-ranging including: advocacy raising class awareness of autism, note taking, peer mentoring, support for behavioural issues, time management training and special examination arrangements. Van Hees *et al.* (2015) indicate that some autistic students ask for disability services to be personalised to meet their unique needs. For example, a student states, 'Treat us on a case-by-case basis, we're alike, but each of us is unique' (Camarena and Sarigiani, 2009: 124). They also ask for more awareness among lecturers and student counsellors, emphasising that 'without a high level of knowledge, support services were unlikely to function successfully' (Van Hees *et al.,* 2015: 1682). Some students assert that flexibility is key to appropriate support: 'Flexibility. I think flexibility in terms of support services: flexibility in terms of learning, flexibility in terms of assessment. And then to be able to tailor the support to the student, so it works with them' (Cai and Richdale, 2015: 38). According to Van Hees *et al.* (2015), 'Students highlighted that staff and other students need to understand the diversity and complexity of ASD, and should listen to students' experiences on what is useful. Measures that work well for one student may not be appropriate for another student'. This establishes the purpose and goal of flexibility in the provision of disability services.

Most literature focuses on student voices regarding the difficulties autistic students may face - mental health, transitioning from secondary school to HE, academic difficulties, social difficulties, daily activities, accommodation and housing, self-awareness, and accessing places due to sensory issues (see Camarena and Sarigiani, 2009; Madriaga, 2010; Cai and Richdale, 2015; Cullen, 2015; Sayman, 2015; Van Hees *et al.,* 2015). These authors also indicate that autistic students' experiences vary individually and that some experiences are positive, and some are negative. An example of a negative experience is reported by Madriaga (2010) who found that autistic students identified spaces within their universities that are inaccessible for them (e.g. libraries, pubs and student unions). The reasons for inaccessibility related to difficulties socialising in university life, due to sensory impairment, lack of social awareness or impairments in communication. Autistic students reported that when they find such places inaccessible, they tend to isolate or exclude themselves from

mainstream society. They also tend to seek refuge in safe spaces (Madriaga, 2010). In addition, students struggle with socialising with others; for example, a student indicated that 'In class every time I am placed into a group, slowly everyone starts to act distant and angry with me leaving me to become the scapegoat and take the blame for anything that goes wrong, despite being a straight-A student. When I contact instructors about my concerns, I am often told to talk it out with my group which goes nowhere' (Cullen, 2015:95).

Students' opinions about helpful and unhelpful practices offer insight into their experiences. However, research focussing on autistic students' views is limited in HE; while some research has been conducted in other countries such as the USA, UK and Belgium, it is almost absent in Saudi HE settings. For example, in a study conducted at an American university, Accardo *et al.* (2019) used a survey and interviews to examine the perspectives of 23 students with autism in regards to their disability services preferences at the university. They found that the students reported a desire for both academic and non-academic support systems. The academic support preferences included changing examination locations, using technology in classes and receiving copies of lecture notes. Another important finding was that students emphasised the need for extended time when completing exams. In their study of 43 students with autism from seven different HEIs in Flanders (Belgium), Jansen *et al.* (2017) had similar findings. The students indicated that extra time for examinations helped reduce stress. Another study by Van Hees *et al.* (2015) at a university in Belgium also found that students with autism preferred to be allowed more time to complete examinations.

In terms of non-academic support, Accardo *et al.* (2019) found that students preferred the following non-academic support: housing services, counselling, and a transition programme. The students with autism reported that some non-academic supports were not valuable, including those focused on socialization, self-advocacy and peer mentoring. However, the students reported the need for assistance in developing their social skills, which might indicate that socialisation services might be useful but needed to be further refined (Accardo *et al.*, 2019). Nevertheless, this is limited to the perspectives of just 23 students from a single American university. Large-scale studies might be useful to validate the findings from studies such as those of Accardo *et al.* (2019), Jansen *et al.* (2017) and Van Hees *et al.* (2015). More research could be directed into what practices autistic students consider would better aid them in HE.

In stage two of this research, I conducted a written discourse analysis of the disability services websites to analyse, in part, whether they use student input such as comments and suggestions to improve services. The website is the principal mediator between the providers of services and the users of services and the point at which students reflect on disclosure, so it is vital in establishing a relationship between students and support services. The next section is a review of the literature in terms of university websites, web accessibility and university websites concerning disabled and autistic students.

2.6. University websites, web accessibility and university websites concerning disabled and autistic students

This section will review the literature regarding how university websites present themselves and will discuss the purpose and importance of university websites and the characteristics of what are considered to be effective websites. Finally, it will discuss university websites in relation to disabled and autistic students and the influence of culture on the designing of university's websites.

2.6.1. How university websites are presented

HEIs use a variety of techniques that are often found in business practices to present themselves in such a way that they can compete in an assumed educational marketplace (Middleton *et al*., 1999; Saichaie and Morphew, 2014). These techniques include the use of mass media such as websites (Mautner, 2005; Saichaie and Morphew, 2014), as part of their advertising and marketing. In the UK and SA, very little seems to be known, in terms of academic research publications, about how colleges and universities portray themselves on institutional websites. In the USA there is some research; for example, a study of 12 colleges and universities conducted by Saichaie and Morphew (2014), found that these institutions portrayed themselves as organisations that prepared the students for employment. More research is needed to understand how disability services websites present their services for disabled students and autistic students. This research focusses specifically on understanding how disability services websites are presented for autistic students in the Saudi and UK HE websites.

2.6.2. The purpose and importance of university websites

A university's website is the 'virtual face' that the institution has chosen to present itself to the online world (Meyer and Jones, 2011). Three suggested reasons make websites important for colleges and universities. First, they are tools for the promotion and marketing of the institution (Middleton *et al*., 1999; Bairamzadeh and Bolhari, 2010; Elsayed, 2017). For example, effective website design is considered to be very important for universities when it comes to attracting prospective students (Ceaparu and Shneiderman, 2002; Astani and Elhindi, 2008). Second, they provide access to tools (e.g. directories and databases). Third, they provide a form of communication (Middleton *et al*., 1999).

In the USA, according to the National Association for College Admission Counseling (NACAC, 2011), 84% of prospective students reported that they used institutional websites to gather information and find answers to their inquiries. Secondary school students and parents often used the websites of educational institutions as a primary tool in order to shop around for the best universities (Astani and Elhindi, 2008; Schimmel *et al*., 2010). University websites provide prospective and current students with essential information about academic resources, student services and campus events and news (Kurt, 2016). Also, university websites are essential for displaying information about a university's programmes and courses, promoting their research programmes and delivering online learning facilities (Rahman and Ahmed, 2013). Furthermore, prospective students look for information regarding the location of the institution, the ranking of the university and the cost of the courses. According to Tucciarone (2009), prospective students rely on information from HE websites when evaluating an institution. This is due to the growth in the use of technology (Schimmel *et al*., 2010). Thus, universities need to design effective websites as such websites are currently considered to be the gateway to all other forms of communication. Insights from communication theory, with its focus on clarity, from multimodality with its emphasis on the affordances of different semiotic resources are likely to contribute to understanding how to design an effective website.

According to Middleton *et al*. (1999), Hite and Yearwood (2001), Lynch and Horton (2002), and Astani and Elhindi (2008), HE websites have two different audiences: external users and internal users. External users often look for information about courses, accommodation and other frequently asked questions. External users are a more heterogeneous group than internal

users. They include a wide range of people: prospective students, as discussed in the previous paragraph, and prospective staff (Middleton *et al*., 1999; Bairamzadeh and Bolhari, 2010); or academics who may want to make contact with various interested parties or use an institution's libraries and resources. External users may also be business people who are looking for people and resources who can help them with their business, alumni who are looking for news and contact information, news media that are looking to disseminate press releases, and donors, benefactors and legislators (Middleton *et al*., 1999). According to Middleton *et al*. (1999), while there is no need to attract internal users, existing students also need a website that can serve them. University websites should focus on utility and the facilitation and enhancement of the study environment which includes making available information about, for example, educational materials, including library catalogues and lecture notes, and the activities of clubs, societies and social groups. An understanding of these different audiences is likely to be significant in determining an appropriate mode or genre for any given webpage.

2.6.3. The characteristics of effective websites

Generally, it is suggested that effective websites must be customer-centric; in other words, the design of the websites must meet the needs of the targeted audience (Nielson, 2000; Astani and Elhindi, 2008). According to Lynch and Horton (2002) and Astani and Elhindi (2008), in their research articles, there are two parts to planning any website: first, setting the goals of the website (and determining the resources needed to achieve these goals) and, second, determining the target audience. For example, in the case of disability services websites, the goal might be providing information for autistic students about academic support and the targeted audience is autistic students.

There are several essential characteristics of a university website's design. Poock and Lefond (2001) and Middleton *et al*. (1999) have summarised the most important characteristics of effective university websites. Above all, the content itself is crucial. This is because university websites are primarily a form of communication. Website content is created by HEIs daily, reflecting how universities increasingly need to communicate their mission and vision, transmit official content, and present their services and resources to diverse audiences (Elsayed, 2017). The university website in itself is not the reason why users visit; instead, the content it provides is the most significant reason for their visit (Kalhor and

Nikravanshalmani, 2015). For example, in a study conducted at the University of North Carolina and the University of Michigan, 97% of the students rated the website content as important or very important (Poock and Lefond, 2001).

The second characteristic of an effective university website's design relates to ease of navigation, with a well-designed university website allowing users to predict where they should look for content (Astani and Elhindi, 2008). The ease of navigating websites also makes the user feel comfortable when exploring them (Ceaparu and Shneiderman, 2002; Elhindi, 2008). The term navigation refers to how the information is organised and presented as well as how the information and the users of the website are connected (Junaini, 2002). Poock and Lefond (2001), Middleton *et al*. (1999) and Bairamzadeh and Bolhari (2010) indicated that the organisation of a website, including having identifiable links in an organised manner, increases the ease of navigation. Therefore, a navigation system is a critical part of a web interface. Junaini (2002) suggested that the navigation system has to be standard and consistent; otherwise, the website users will not be able to memorise the navigation scheme that the designer has attempted to deliver. Poor navigation can lead the user to become lost within the website's structure and get frustrated (Bairamzadeh and Bolhari, 2010).

The third important characteristic of website design is usability, which refers to 'the extent to which a system supports its users in completing their tasks efficiently, effectively and satisfactorily' (Bairamzadeh and Bolhari, 2010: 469). According to Brajnik (2000) and Abanumy (2005), website usability implies accessibility, and it means that a website is 'user-friendly', In terms of the web, usability 'extends to factors such as speed, clarity, intuitiveness of navigation, ease of use, readability and personalization' (Bairamzadeh and Bolhari, 2010: 469). Also, a visually attractive website can make the user's experience enjoyable and easier (McKinney *et al*., 2002; Astani and Elhindi, 2008). More specifically, Saeed and Amjad (2013) indicated that, in order to create an effective university website for current students, the website has to be user-friendly. The university website's functional modules, navigation, structure and layout have to be easy to use so that students feel comfortable while using it and easily understand the information.
Also, an effective website has to be accessible for disabled students, which will be discussed in the following section.

2.6.4. Web accessibility

According to Hackett *et al*. (2004), 'accessibility when pertaining to a web page means that information has been made available for use by almost everyone, including persons with disabilities'. Abanumy *et al*. (2005: 100) add that 'the goal of web accessibility is to allow universal access to information on the web by all people but especially by people with any impairment, no matter what its severity (e.g. blindness, low vision, deafness, hard of hearing, physical disabilities or cognitive disabilities)'. Although designing an accessible website may increase the design costs by 1–2%, accessibility increases the audience by 20% (Heim, 2000).

Accessibility can be evaluated by manual evaluation methods, by human evaluators or by the use of automated accessibility testing tools. These tools vary in terms of cost, presentation and the kind of reports provided (Verkijika and De Wet, 2017). However, According to Sloan *et al*. (2002), some disadvantages are associated with these tools. First, the results/reports of these tools can be overwhelmingly detailed and long, making them difficult to interpret, especially for non-expert web developers. Second, these tools cannot investigate all accessibility problems, resulting in the need for additional manual inspection. For example, 'only a human can decide whether a text alternative for a graphic does provide the equivalent information to that provided by the graphic' (Sloan *et al*., 2002: 315). Third, in some cases, these tools may identify accessibility barriers to a resource, but when this resource is inspected manually, the accessibility barrier may be of minimal significance. These limitations have led to the manual investigation of the visibility of disability services websites in this research.

The World Wide Web Consortium (W3C) has set standards and checkpoints for developers of websites to use (Kuzma, 2010). It is vital that websites, in general, comply with the accessibility standards and accessibility checker tools that are available online. Many of these checkers are available to the public. In 1999, W3C developed the first accessibility standards for the web: the Web Content Accessibility Guidelines (WCAG 1.0). These have14 checkpoints that represent the basis for conformance meeting the needs of disabled website users (W3C, 2008; Kuzma, 2010). WCAG 1.0 was later upgraded to WCAG 2.0 (Li *et al*., 2012; Verkijika and De Wet, 2017). WCAG is internationally accredited and has become the preferred and leading accessibility standard around the world (Adepoju *et al*., 2016; Verkijika and De Wet, 2017). WCAG 2.0 requires websites to meet four fundamental principles in

order to be accessible: They must be robust, perceivable, operable and understandable (Verkijika and De Wet, 2017). Robust means that the content is presented in a way that can be interpreted reliably by a wide variety of users, including users who use assistive technologies. Perceivable websites are those that meet the users' different perceptive preferences. The operable principle means that the navigation is designed in such a way that users can manoeuvre it with different options, including, for example, different devices and various mouse and keyboard controls. Finally, the understandable principle refers to the clarity both of the information and the user-interface operation (Verkijika and De Wet, 2017).

In 2006, 'the UN Assembly passed a Treaty on [the] Rights of Disabled People that would guarantee persons with disabilities equal access to information and communications technology (ICT)'. SA has ratified and signed this United Nations treaty (Al-Khalifa, 2012; UN, 2018). Al-Khalifa (2012) found that Saudi government websites were not accessible by disabled individuals. She attributed this problem to the lack of awareness regarding the importance of web accessibility for disabled users.

According to Kurt (2016), 'if web sites are not wholly accessible and compatible with assistive technologies, students with disabilities may be unable to access information critical to their academic success and may also be prevented from fully participating in university activities' (506). Web content equality, according to Giannoumis (2017), usually focuses on users with visual and hearing disabilities, and less attention has been given to users with cognitive disabilities, which includes those with autism and intellectual disabilities, brain injuries and developmental disabilities.

Little research has focused on studying accessibility barriers of Saudi university websites. Therefore, Alayed (2018) in her study, tried to fill this gap in knowledge by identifying issues related to accessibility of Saudi universities. In terms of the UK context, a study has reviewed the accessibility of 11 UK HE sector websites (Sloan *et al.*, 2002). The authors found that these university websites had several accessibility issues. First, they failed to provide equivalent textual alternatives for graphical features (e.g. images) that were not accessible to users with visual impairments and non–graphically enabled browsers. Second, the websites had issues related to navigation ease. For example, they may not have had a navigation bar on every page or a link to the homepage on every other page. Third, these websites also had

issues related to information layout. For example, some 'pages had an excess of information requiring lengthy scrolling' and lists that did not follow a logical order (Sloan *et al*., 2002: 322). These issues resulted in usability challenges for users both with and without disabilities (Sloan *et al*., 2002). Further research is needed as this study was conducted about 17 years ago.

Little research, if any, has focused on the specific study of disability services websites within HE websites. Thus, the following section will review the literature in regards to university websites concerning disabled and autistic students.

2.6.5. University websites in relation to disabled and autistic students

Via their websites, many HEIs publicise their disability services, perhaps aiming to present the institution as 'disability friendly' and as a welcoming environment for people with disabilities (Jacklin, 2011). I have not been able to locate, however, any research which particularly focuses on university websites concerning prospective or current autistic students. In particular, according to Reichow *et al*. (2012), the websites of HEIs have rarely been examined in terms of how they communicate their services to autistic students. Reichow *et al.* (2012) searched the content of 30 different American websites, including five university websites, using Google. They found that these websites had high-quality information about autism, suggesting that this was due to the high standards that these websites implement and the procedures they follow for placing information online (e.g. publication policies and institutional review). Among the websites that they studied, they found that the health information websites had higher-quality information than websites with more general purposes (e.g. news sites, blogs and individuals' websites). There is a need for more research that looks at how university websites present their disability services for students with autism. This research aims to fill this gap in knowledge.

Abu Shaera's (2012) study evaluated websites that provide disability services for disabled individuals from the perspective of university students in the special education department at King Abdul Aziz University (KAU). The sample of this research comprised 43 websites providing disability services for individuals with physical disabilities, learning disabilities, giftedness, autism, hearing impairment, language disorders, visual impairment and other unspecified disabilities. Also, the study evaluated websites providing early intervention.

These websites were also from different providers, including public websites, private websites, voluntary websites and personal websites. The results indicated that on a scale of 5, the websites scored 3 for the quality of the website design. The author stated that this result could be due to the absence of technical support. The university students at KAU emphasised the importance of the websites' content and ways of communicating with their users. However, they did not emphasise the importance of web accessibility in navigating these websites.

The final section of this literature review will focus on the influence of culture on university websites.

2.6.6. The influence of culture on university websites

The cultural orientation of the web implies 'the presence of certain cultural values in online communication' (Gevorgyan and Manucharova, 2009: 395). Cultural values can be described as 'specific mindset which underpins individuals' choices and judgments' (Moura *et al*., 2016: 313). Such values define, for example, what is acceptable or unacceptable and moral or immoral among the members of a cultural group (Moura *et al*., 2016).

Studies (e.g. Baack and Singh, 2007; Gevorgyan and Manucharova, 2009) have shown that culture acts as a moderating factor influencing both the online experience and the user's perception. In addition, the culture profiles of targeted users have profoundly influenced the development of online institutions (Baack and Singh, 2007; Gevorgyan and Manucharova, 2009), and failing to address cultural traits when designing websites can cause inaccurate perceptions and cultural misinterpretations (Singh *et al*., 2004, 2006). The most used and most successful cultural framework for understanding websites to date was developed by Singh *et al*. (2003). This framework contains the following dimensions: collectivism and individualism, high–low context dimension, power distance and uncertainty avoidance.

Hofstede (2003) emphasised that Eastern culture, including that of SA, is different from Western culture. According to Singh *et al*. (2003) and Hofstede (2003), in collectivist societies such as China, Japan and Mexico, societal norms are valued, in-group ties are strong, and group decision making is encouraged. By contrast, in individualist societies such as Australia, Canada, the UK and the USA, individual decision making is encouraged,

personal freedom is valued, and ties between individuals are loose. These differences might be realised on the websites via the localised messages that the website's content send.

In terms of the meaning of high- and low-context cultures, 'context is the information that surrounds an event' (Singh *et al*., 2003: 70). A low-context culture, such as the USA, emphasises clarity and directness in communication. In a high-context culture, such as China, 'the information is already embedded in the context of the communication, and very little is explicitly coded' (Singh *et al*., 2003: 71). In terms of uncertainty avoidance, some cultures are high concerning the avoidance of uncertainty, valuing low-risk situations and looking for direction (e.g. Greece, Japan and Mexico). By contrast, countries such as the UK, the USA, Canada and Australia have a higher tolerance for risk and ambiguity. (Hofstede, 2003; Singh *et al*., 2003). Finally, the power-distance dimension describes how some societies, such as India, China and Mexico, are high with respect to power distance, accepting hierarchy and power in society, while others, such as the USA and Canada, are low in this dimension, respecting equal rights and egalitarianism and discouraging status symbols (Hofstede, 2003; Singh *et al*., 2003). According to Hofstede (2003), SA culture scored high in uncertainty avoidance and power distance and low on individualism, whereas Western culture scored low in power distance, uncertainty avoidance and high in individualism. Almakky *et al*. (2015) state that it is important that these differences are not used to create stereotypes; instead, it is essential that these differences are taken into account when designing any form of online communication (e.g. websites). These differences in culture are essential in creating a university website that aims to serve users from different cultures (e.g. Saudi and British culture).

Culture influences the design of websites, including, for example, the use of symbols. Some symbols are sharply culturally defined because they represent a meaning that is not understood in another culture. Using inappropriate symbols may reduce the accessibility of web content, and some symbols may be offensive or even against the law in certain countries (Al-Badi and Mayhew, 2010). Also, the multimedia used in a website will differ from one culture to another (Sun, 2001). Multimedia carries different cultural messages, and the pictures and graphics thus have to be suitable to the culture (Alayed, 2018). For example, in SA, some people do not listen to music because they believe it is forbidden. Therefore, 'if a Saudi user navigates a website that presents a video with music in the background, for example, he might not continue watching it and consequently quit the website' (Alayed,

2018: 58). Alayed (2018) suggests some appropriate ways to deal with such situations, including providing another version of the video without music, providing a text alternative to the video and providing a hint that there is music in the video. Disability services websites might also have their own culture and norms in regards to the content of the websites. For example, the use of terminology to refer to autistic students might be influenced by the culture and values adopted by the disability services providers.

2.7. Conclusion

In conclusion, no research seems to have been conducted to understand how disability services websites within university and college websites in SA and the UK present themselves to disabled students and autistic students specifically. Thus, there is a clear need to understand how disability services are mediated via these websites.

This literature review has revealed that the HEIs' websites have rarely been examined in terms of their visibility and the ease of navigation for website visitors who are on the autism spectrum; thus, investigating the websites' characteristics is essential to understand how autistic students experience the websites of universities and colleges. From reviewing the literature, there is a debate surrounding how best to include autistic students and whether services should be autism-specific or generic disability support. There is also a debate regarding how best to refer to autistic students; for example, is it best to refer to them using person-first language or identity-first language? Studies which gathered students' voices were presented; revealing, for example, that some students find that their experiences in HE were challenging and had many difficulties. There is a need for more research about the factors that might influence the nature of disability services. However, from the literature, the factors that might influence the nature of disability services are disability policies, models of disability, faculty's attitudes, and disclosure of the disability by the disabled student. Finally, the different kinds of services provided for autistic students in HE were presented.

The review of the literature revealed that no research had been conducted regarding the information provided to (potential) autistic students on the websites of UK and Saudi universities. Therefore, I intend to investigate this area. Also, in reviewing the studies about disability services for autistic students, I did not find any study that discusses the discourses communicated on the disability service websites of UK and Saudi universities. Thus, research

on this subject is needed to fill the gap in the literature. Finally, I am interested in discovering the differences and similarities in the disability services for autistic students in two different settings (SA and the UK). This comparison will be made to understand better what universities claim to offer to autistic students and understand the different factors that might influence disability services in both settings. The main research questions are as follows:

1. How is the provision for autistic students presented on university websites in the UK and SA (that have enrolled autistic students)?

2. What discourse seems to be communicated on the disability services websites in the UK and SA (where autistic students are enrolled), and what kind of services seem to be available for them?

3. How are disability services organised at SA and UK universities?

The methodology chapter will provide more details on the research design used to respond to the research questions.

CHAPTER 3: Methodology

3. Introduction

As stated in the introduction, this research project began with a different focus and a different research design. The original research design included a survey aimed at investigating the factors that influence the level of autism awareness on the part of the disability services staff. While this survey was designed and implemented, a very low return rate (4%) deemed its results impossible to be included in the final analysis, as the survey did not achieve its purpose. Also, the survey did not guarantee a balance across the two countries and therefore was removed from the design. Additionally, the original research design included the possibility of interviews. The intention of these interviews was to examine the views of staff members with respect to the provisions available to autistic students and to investigate their opinions with regard to how such services might be improved. However, none of the staff members were interested in taking part in such an interview. It was therefore decided to change the research design into a documentary analysis, which is presented and discussed in detail in this chapter.

This chapter first presents the conceptual framework drawing upon theories outlined and discussed in the previous chapter. It then discusses and justifies the use of an interpretive paradigm as the informing paradigm in this study. The research questions and aims are presented, and the use of documentary analysis in the three different stages of the research is discussed in detail. In addition, the research ethics and research quality are discussed. The implementation of the design and the steps taken to reduce subjectivity in this research, which also reflect on the design, are all presented in that order.

3.1. Conceptual framework: Communication theory

'Theories are tools to understand the world' (Hanitzsch, 2013: 3). The conceptual framework for this study is grounded in a theory that is useful in understanding university websites: communication theory. This section shows how this theory is the basis of the conceptual framework of this research.

Websites are the creation of humans attempting to communicate. Thus, university websites can be understood in the light of communication theory, which aims to understand how and whether communication occurs (Meyer and Jones, 2011). The images and text that appear on a university's website may be the first institutional impression for a viewer or a potential student (Saichaie and Morphew, 2014). Therefore, the messages that websites convey are very important (Saichaie and Morphew, 2014). As Meyer and Jones (2011) explain, communication theory deals with exchanging and making meaning, but this is not a complete or straightforward process. Between the sender and the receiver of the message, there is scope for misunderstandings such that what is heard is not always a perfect reflection of what was said. The speaker and hearer make sense of the world in regard to their context and understanding, and so no communication is ever poured directly from the mind of the sender into the mind of the listener or reader – their understanding and experience always mediate it.

According to Ballantyne (2016) and Craig (1999), two widely acknowledged communication paradigms have influenced the field of communication: communication as transmission and communication as interaction. Communication as transmission considers communication to be a process of encoding and decoding messages that leads to a response from the receiver of the message. The message then has an impact on behaviours and attitudes. Communication is considered to be a dynamic process and a tool that transfers knowledge and ideas from one mind to another. The other paradigm, communication as interaction, sees communication as an ongoing cycle in which the focus is on the subjective interpretations of the message. The sender and receiver of the message are co-creators of the meaning, and social context and culture are recognised as important, influential factors. In light of this understanding of communication theory, this research considers how disability service providers communicate their services to autistic students.

According to Bük *et al*. (2017), university websites are a form of communication. Usually interactive, they are used to share information and to garner public attention. They act as 'an identity card representing an online presence that is in line with the strategic aims of organisational communication' (Bük *et al*., 2017: 58). As a communication platform, a university website introduces the institution's identity. As such, it is noteworthy for its versatility and for being the university's first point of contact with the public (Bük *et al*., 2017). What communication theory reveals in this regard is that there may be a disconnection between this presentation of an institution's identity and purpose and the readers' perception

of it. Communication theory seeks to understand the barriers that lead to ineffective communication to support the communicator in sharing information effectively with the listener/reader. This, of course, is especially pertinent when the audience is students with disabilities in general or autistic students in particular.

Two contrasting views in relation to communication and communication theory were outlined above: transmissive and interactive. The view informing this study is that communication is interactive; even though the website is not literally responding to the user, the user is interacting with the information. Generally, websites are channels for interactive communication through the sharing of information (Bük *et al*., 2017). This is relevant to the current study because the study considers the website communication of disability service providers in UK and Saudi HEIs. The means by which I explore the use of language and how information is presented is through written discourse analysis of the information provided by the disability service providers. These websites attract both prospective students and existing students, including autistic students, members of university staff and, indeed, researchers, who may all have different purposes.

3.2. The informing paradigm in this study and its methodology

Lincoln and Guba (1985) defined a paradigm as 'a systematic set of beliefs, together with their accompanying methods' (cited in Arghode, 2012: 155). Thus, a paradigm is a model, sign or representation (Buganza, 2012). A paradigm is used in the effort to understand a phenomenon by acknowledging the influence of beliefs or assumptions on that phenomenon. For example, this research studies the influence of the assumptions of the disability service providers on how they communicate with autistic students. Additionally, a paradigm is the lens through which a researcher interprets a phenomenon based on previous understanding and knowledge (Arghode, 2012).

This research is informed by the interpretive paradigm, which is also known as naturalistic and constructivist (Davies and Fisher, 2018). The interpretive paradigm recognises multiple realities or truths. I adopted the interpretive paradigm because it best suits the types of questions asked in this study. The research questions investigate how the providers of disability services understand reality, both in terms of their roles as providers and their perceptions of students' needs when constructing the documents and website texts that

describe the provisions that are available for autistic students. As a researcher, I was concerned with understanding more about how provisions for autistic students are presented on the websites of UK and Saudi universities. I expected that there would be multiple answers to the research questions, and, therefore, I did not wish to rely on only one understanding.

The interpretive paradigm aims to describe and understand a phenomena (Davies and Fisher, 2018). In the case of this research, it aims to describe the provisions for autistic students presented on university websites in the UK and SA (for those that have autistic students enrolled), and it focuses on understanding what discourses seem to be communicated on these websites and what kinds of services seem to be available for them. It also aims to understand how disability services are organised at SA and UK universities.

In addition, interpretive research usually uses a small sample size for the purpose of collecting data that are in-depth and rich (Davies and Fisher, 2018; Schreier, 2018); for example, the sample size in stage three of this research was only four universities.

'There is a tight connection between interpretivist paradigm and qualitative methodology' (Thanh and Thanh, 2015:24).The crucial purpose of researchers in the interpretive paradigm is to get in-depth and insightful information, and this is likely to be achieved by conducting qualitative research (Davies and Fisher, 2018). Qualitative research captures data through the process of 'deep attentiveness' (Punch, 2009). Moreover, qualitative research is more productive in terms of providing deep understanding of the phenomenon compared to quantitative research because it describes the world in words instead of numbers and statistics. The fundamental methodology in conducting this research was qualitative (Pathak *et al*., 2013). Qualitative methodology includes a range of approaches, such as documentary analysis, ethnography, grounded theory and action research (Vaismoradi *et al*., 2013; Pathak *et al*., 2013). The approaches used in this research are different kinds of documentary analysis, such as written discourse analysis.

3.3. Research aims and questions

In qualitative research, research questions are often subject to change as the researcher becomes more familiar with the research content (Krauss, 2005). In this research, the

research questions evolved numerous times as the methods used to explore the phenomenon also changed. Due to a very low response rate and lack of participation in the original research design, as outlined in the introduction, I instead investigated the research phenomena (disability service provision and support for autistic students) via documentary analysis of information on the websites of UK and Saudi universities and colleges, rather than through gathering participant data. To this end, I therefore incorporated and examined the phenomena from various angles; for example, I aimed to discover what was communicated by the websites of UK and Saudi disability services and to determine how the available provisions for autistic students were presented on these websites. Table 1 presents the main and sub-questions of this research. Each question was answered by conducting a form of documentary analysis (e.g. written discourse analysis). The ultimate aim was to develop an understanding of how disability services for autistic students are communicated and of what is presented on the university websites.

Figure 1 illustrates the three stages of this study. The figure is an inverted triangle because the sample became smaller and the focus of the stage became narrower.

The three stages of this research come in this order because stage one aims to identify provision types in order to continue on to the next stage of analysis, stage two. Stage three can come before or after stages one and two. Although the data of stage three were collected first, this stage is presented last because it has the smallest sample compared to the other two stages.

Table 1: The research questions, aims, research study stages and types of documentary analysis used for each research question

Stage one: How are the provisions for autistic students presented on university websites in the UK and SA (for those that have autistic students enrolled)?		
Sub-questions	**Aims**	**Type of documentary analysis**
How visible are the disability services?	To develop a general understanding of the accessibility of information about disability services available to autistic students	Usability
What is the ease of navigation of the websites like?	To develop a general understanding of the ease of navigation of information about disability services available to autistic students	Usability
Is the presented provision generic or autism-specific?	To identify provision types in order to continue on to the next stage of analysis (written discourse analysis)	Deductive Content analysis
Stage two: What discourse seems to be communicated on disability service websites in the UK and SA (where autistic students are enrolled)? And what kind of services seem to be available for them?		
What messages seem to be communicated in the text?	To uncover the meaning that underpins the text (the messages within the text)	Inductive
What assumptions are made about autistic students and the services provided for them?	To uncover the meaning that underpins the text (assumptions and beliefs present in the text)	
What form does the message take?	To understand the language that is used when communicating autism provisions	Written discourse analysis
What provisions are available for autistic students, according to the university's website?	To discover what provisions the universities claim to offer to autistic students	Inductive Thematic analysis
Stage three: How are disability services organised at SA and UK universities?		
What are the similarities and differences between the two Saudi and two UK universities in terms of disability services for autistic students?	To understand the differences between the UK and Saudi contexts in terms of disability services for autistic students	Deductive Content analysis
What influences seem to shape how disability services are organised at SA and UK universities?	To understand the influences that seem to shape the organisation of disability services	Inductive Thematic analysis

Figure 1: Stages of the research study

Stage 1: Usability and content analysis of 153 UK and 58 Saudi universities' disability service websites

Stage 2: Written discoures analysis and thematic analysis of 13 UK and 2 Saudi universities' disability service websites

Stage 3: Thematic analysis and content analysis to compare 2 SA and 2 UK universities' disability service websites
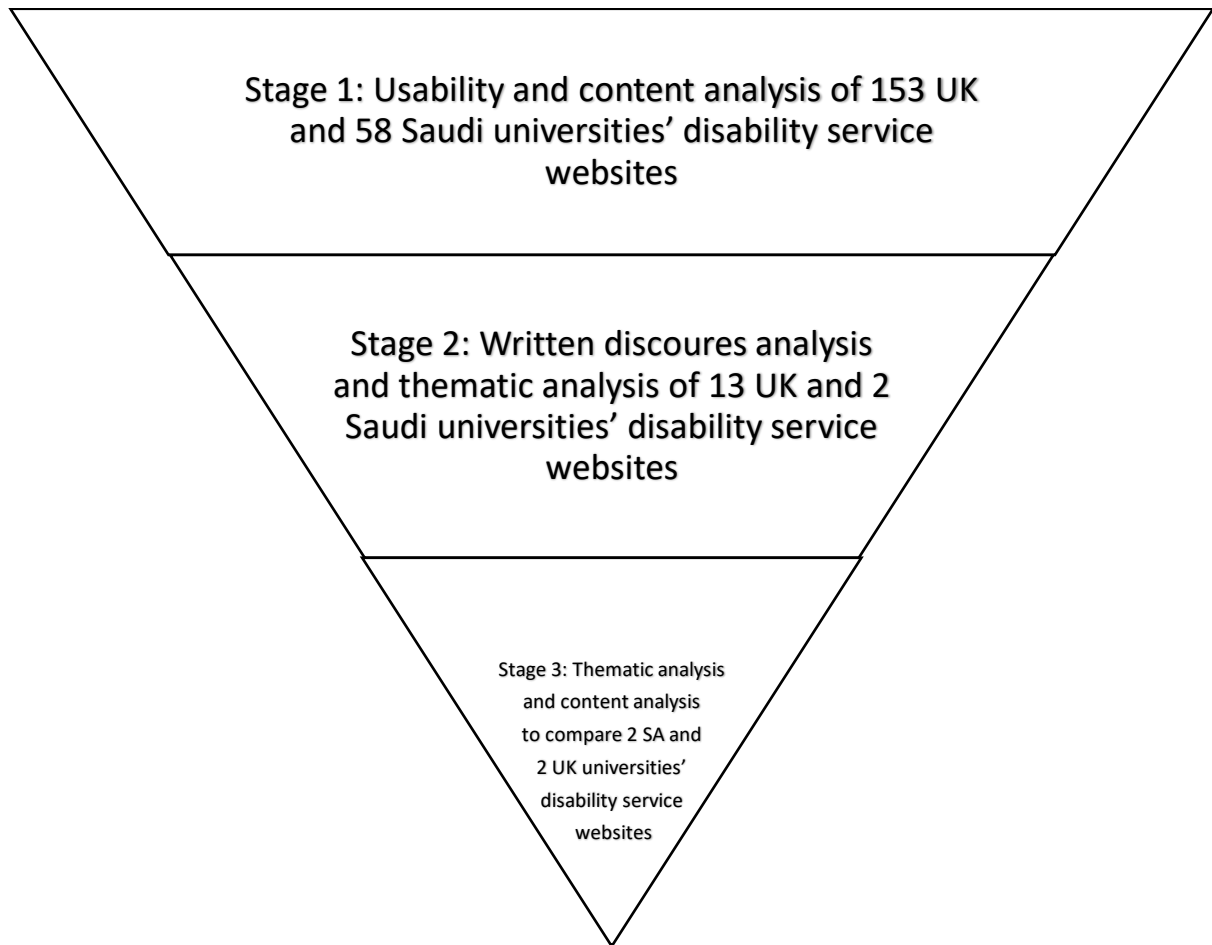
3.4. Documentary analysis

Table 1 illustrates how documentary analysis was employed in all three stages of this study. Documentary analysis can be defined as 'a research method that uses a set of procedures to make valid inferences from a text' (Weber, 1990: 9). Another definition was offered by Bowen (2009), who stated that it is a systematic procedure for the evaluation and review of documents, both electronically transmitted (such as via the internet) computer records and printed materials. According to Bowen (2009) and Bloor and Wood (2006), documentary analysis can be used as a standalone method, depending on the phenomena that are being investigated.

A wide variety of documents is used by researchers to conduct documentary analysis. This includes web pages, newspaper articles, administrative records, diaries, official reports and

letters (Bloor and Wood, 2006). According to Prior (2003), documents are social products. They are dependent on collective production and consumption, reflect a specific discourse and are constructed according to specific conventions (Bloor and Wood, 2006). In addition, researchers analyse diverse types of documents: personal or official, publicly available or private, produced for purposes other than research or produced for the attention of researchers (Bloor and Wood, 2006). In this research, the analysed documents are official, publicly available and produced for purposes other than research. Documents (e.g. education policies and official websites such as that of the Department of Education in England) can provide public texts and insight into how institutions (e.g. schools, universities and colleges) work and what practices and values guide decision-making (Fitzgerald, 2012). Documentary analysis is a form of qualitative analysis that requires researchers to 'locate, interpret, analyse and draw conclusions about the evidence presented' (Fitzgerald, 2012: 12), and it is suggested that it requires considerable interpretive skill to uncover the meaning of the contents (Fitzgerald, 2012).

The new research questions that were developed after the design was altered were able to be answered via documentary analysis; an advantage of using a form of documentary analysis is that it enables a researcher to gather information from selected data rather than collected data (Bowen, 2009). Documentary analysis requires that a researcher relies on documents rather than on participants to gather data. The information needed to answer my new research questions was available in the public domain. In addition, the advantages of documentary analysis are that it can provide access to data that may be difficult to gain via interviews and that it is accessible at a time convenient to the researcher (Fitzgerald, 2012). In addition, while fieldwork is often costly, documentary analysis 'may involve few costs apart from the researcher's time' (Lee, 2012).

According to Mogalakwe (2006: 224): 'The general principles of handling documentary sources are not different from those applied to other areas of social research'. Mogalakwe (2006) and Scott (1990) suggested that there are three quality control criteria in handling documentary sources: meaning, credibility and authenticity. The following is an explanation of each criterion and how it was implemented in this study:

- Meaning: The meaning of documentary sources is when the researcher looks for the ultimate purposes of the document and what the document contains (Scott, 1990). In

this research, the ultimate purpose of the documents that were analysed is providing information for autistic students, and the content of these documents was analysed using written discourse analysis, thematic analysis and content analysis. According to Scott (1990), it is important to identify the meaning of the document/text as a whole.

- Credibility: This refers to whether the evidence is free from distortion and error. Examples of documents that are free from distortion, according to Mogalakwe (2006), are those that have been prepared independently and prior to the research. This was the case in this study. The documents that were obtained from disability service websites of UK and Saudi universities were developed as 'documents' or web pages that provided information for students before I started my research. In addition, documents that are free from distortion, Mogalakwe (2006) states, are documents that were not developed for the benefit of the researcher (this was also the case in this study). In this way, the 'documents', texts and web pages in this study were credible.

- Authenticity: This refers to whether the evidence from the documents is genuine and reliable (Mogalakwe, 2006). According to Mogalakwe (2006), authenticity is the fundamental quality criterion for any research. In this case, the documents are genuine and have integrity because they were published as genuine documents for autistic students who needed information about support at the university.

Documentary analysis can be used to collect empirical data, and, as a process, it is nonreactive and unobtrusive. The choosing of documents for analysis must be based on authenticity and usefulness and not on accessibility and existence alone (Bowen, 2009). One must also take into account the intended audience (in this study, autistic students) and the context in which the documents were produced (e.g. HEIs). Generally, the purpose of documentary analysis is to gain understanding, develop empirical knowledge and elicit meaning. The data analysed here exist and are used naturally by students with autism, and so, the fact that the data have not been produced for the research might also be viewed as an advantage.

There are limitations inherent to documentary analysis; for example, documentary analysis may yield insufficient detail to address the research question as documents are produced for some purpose other than the given research study. Additionally, the documents are created independent of a research agenda; in other words, the researcher does not control the amount

of data contained within the documents (Bowen, 2009). The advantages of documentary analysis, however, outweigh the limitations, as the mentioned limitations are potential flaws rather than major disadvantages (Bowen, 2009). Developing a deep understanding of the purpose of the documents and of what is actually occurring within the research environment can help a researcher to effectively address the limitations of documentary analysis (Robson, 2000).

The analysis of data from documents includes, but is not limited to, discourse analysis, content analysis, conversation analysis and grounded theory. The approach used must reflect the aim of the study and the research questions (Frey, 2018). In this study, content analysis was used in stages one and three, written discourse analysis was used in stage two and thematic analysis was used in stages two and three. The following is a discussion of these types of documentary analysis.

3.4.1. Content analysis (used in stages one and three)

Content analysis was used in the field of mass communication during the early twentieth century (Robson, 2002; McCulloch, 2004). It was initially utilised as a method of quantitative analysis in the social sciences realm in the USA. It has since become a common strategy for the collection and analysis of documents when both qualitative and quantitative examination is required (Robson, 2002). Content analysis is also known as textual analysis. The content may be pictures, conversations, texts or words. Content analysis is concerned with pieces (e.g. words) rather than with generality (Pierce, 2008). It is useful for understanding and identifying both the conscious and the unconscious messages communicated by text (Given, 2008). According to Bowen (2009), content analysis is 'the process of organizing information into categories related to the central questions of the research' (32). Thus, the aim of content analysis is to create concepts or categories that describe the phenomenon under study. The purpose of these categories and concepts is to develop a conceptual system, model or classification. However, a researcher must choose between the terms *category* and *concept*; for example, if the researcher seeks to develop a theory, the word 'concept' is more appropriate. However, *category* is the term mostly used in literature, and I have used the term category in the content analysis of this research. Classifications were used for conducting the content analysis for stage one. For example, I used the classifications of highly visible, averagely visible and low in visibility to classify the degree of visibility of disability service

websites. For stage three, I identified a list of services and support (categories) for example, 'financial support' for group services that were mentioned in the disability service documents and websites about financial support.

A category is a group of words with similar connotations or meanings (Stemler, 2001). Identifying categories is usually an 'iterative process, so the researcher spends time revisiting categories identified previously and combining or dividing them, resolving contradictions as the text is analysed over and over' (Given, 2008: 3). In addition, a single piece of text (e.g. a sentence) may be related to more than one category. Categories must be consistent with the text under analysis. For example, if the text uses the word *joy*, the category has to use the same word (*joy*) as a category, rather than a synonym, such as *happiness*. 'This practice is related to the need to remain true to the source of the text' (Given, 2008: 3).

According to Elo *et al*. (2014), the process of content analysis involves three main phases: preparation, organisation and reporting of the findings. The preparation phase includes collecting data, 'making sense of the data and selecting the unit of analysis' (Elo *et al*., 2014: 2). The organisation phase includes the inductive approach, in which the researcher creates categories and open coding. In deductive content analysis, the organisation phase includes reviewing all of the data for content and then coding it, according to predetermined codes and categories. In the reporting phase, the 'results are described by the content of the categories describing the phenomena' (Elo *et al*., 2014: 2), whether using inductive or deductive approaches.

Deductive content analysis is also known as direct content analysis where prior research – or a theory – exists about a phenomenon (Hsieh and Shannon, 2005). The process of using deductive content analysis includes identifying key variables or concepts as initial coding categories from the text (Hsieh and Shannon, 2005). Then, it is necessary to read and highlight all texts that, on first impression, appear to represent the concepts. The next step is to code all highlighted passages using the predetermined codes. A new code is given for any text that cannot be categorised with the initial coding (Hsieh and Shannon, 2005). Another strategy that can be used in deductive content analysis is to begin coding immediately with the predetermined codes, leaving the data that cannot be coded to be analysed later. They may represent a subcategory of an existing code or represent a new category (Hsieh and Shannon, 2005). I used a deductive coding approach in both stages one and three. In stage

three, for example, based on the literature review, I developed a list of disability services, and then I searched for each of these items in the analysed texts (disability service documents and disability service websites). For stage one, I also used predetermined categories to categorise the visibility of disability services (e.g. high visibility) and the ease of navigation (e.g. high ease of navigation).

According to Lune and Berg (2017), the most important thing in conducting content analysis is to follow a systematic procedure. This means that any researcher applying this procedure will obtain the same result. The objectivity of the analysis means setting criteria of selection for both inductive and deductive content analysis (Lune and Berg, 2017).

> 'We determine in advance how to decide what content is being coded, how it is to be coded, and how the codes are to be used in the analysis. We have to know what we're looking for and how we will recognize it when we find it before we start looking. Additional codes may be added as we proceed, but usually only as variations on the already-identified themes' (Lune and Berg, 2017: 185).

This is the case in both stages one and three of this research, as will be described in later sections in this chapter.

3.4.2. Written discourse analysis (used in stage two)

Discourse analysis emerged in the early 1970s (Kaplan and Grabe, 2002). It is defined as the study of the language in use (Gee, 2011; Sutherland, 2016). According to Gabel *et al.* (2016), not only the presence of texts and visuals but also their absence can create meaning. Stubbs (1983: 1) defined discourse analysis as the study of 'the organization of language above the sentence.' Discourse analysis methods are relevant for linguistic studies as well as those interested in how language works and how it is implicated in social processes (Arthur *et al.*, 2012). According to Salkind (2010: 2), 'Paradigmatically, discourse analysis assumes that there are multiple constructed realities and that the goal of researchers working within this perspective is to understand the interplay between language and social context'. The ways in which discourse is studied and conceptualised are the result of the theoretical viewpoint of many different disciplines (Arthur *et al.*, 2012). According to Gee (2005), Jones (2012) and Kevin and Neumann (2016), no one approach to discourse analysis is correct. Approaches to discourse analysis that are part of the discipline of linguistics are tied to the grammatical details of language. Other approaches concentrate on themes, issues and ideas as they are

expressed in writing and speech (Gee, 2011). In this research, I only utilised this approach – focusing on ideas and issues.

According to Sutherland (2016), there is no significant difference between written and spoken discourse analysis, as a researcher who conducts a spoken discourse analysis requires a transcript of the conversation/speech under examination in order to properly complete the discourse analysis. I have used the term 'written discourse analysis' to show the reader that I relied on texts rather than on transcripts while conducting this discourse analysis. While performing this written discourse analysis, I was an outsider with respect to the data. One advantage of being an outsider is that one can view old things as strange and new again. In addition, I was in a similar role to the student seeking to gain information from the document; sometimes insider knowledge can render an author blind to the perceptions of the reader. However, the disadvantages of assuming an outsider status are that it is sometimes necessary to make guesses as to an item's meaning or to conduct additional research in order to understand the data. In this study, I did not have the profound knowledge of the documents' context that an insider might have that thus allow the insider researcher to make good judgments about the meaning behind the data. However, the role of both insider and outsider researchers when investigating phenomena is to make the data strange and new. For example, one must determine what is contained within the text that is worth questioning and what data seem confusing or unclear. A researcher must also consider how the author of a text/the speaker uses language, how he/she interacts, how he/she uses various terms and what he/she believes and values (Gee, 2011).

Hodges *et al*. (2008) and Jones (2012) distinguish three different approaches to the study of a phenomenon via discourse analysis. First, they identify formal linguistic discourse analysis; this method involves a structured analysis of a text aimed at uncovering the function of the text and discovering the general underlying rules of linguistics (this approach was not used in this research). Researchers who adopt this formal approach to discourse (Phillips and Hardy, 2002; Jones, 2012; Cameron and Panović, 2014) define it as 'language above the level of the clause or sentence', and they 'try to understand the kinds of rules and conventions that govern the ways we join clauses and sentences together to make texts' (Jones, 2012: 45). Second, they distinguish empirical discourse analysis: This method focuses on the meanings and actions that are created by the individuals who produce the language. This method is less structured and looks for the broader themes and functions of the language (this approach was used in this

research). This approach looks at the use of language as a way to construct different social identities (Phillips and Hardy, 2002; Jones, 2012; Cameron and Panović, 2014). Language is associated with what we believe to be right or wrong (Jones, 2012). Finally, they describe critical discourse analysis: This level of analysis considers not only the social uses of language but also the power structures that are involved. This method can be used to rethink the roles, institutional practices or relationships at play (Hodges *et al.,* 2008); this approach was not used in this research.

Arthur *et al*. (2012) identified steps that help a researcher conduct discourse analysis. First, the researcher must identify the type of documents being analysed (e.g. policy documents and textbooks). This research analysed disability service online documents or web pages from universities in the UK and SA. Second, the researcher must consider what will constitute a sufficient sample. In this research, a range of sampling techniques was used in the different stages to establish sufficient samples, as will be described later in this chapter. Third, the researcher must read the written discourse and identify any linguistic strategies, such as questions or indirectness, that are frequent or particularly lexical, such as the use of specific phrases or words – for example, the use of questions to frame information about disability services for autistic students.

Mautner (2005) discussed the methodological issues related to conducting critical discourse analysis on web-based data. Although this study does not use critical discourse analysis, the points Mautner (2005) makes are interesting and relevant as they refer to web-based data. He states: 'All web-based material is ephemeral **potentially** and most of it is in actual fact' (Mautner, 2005: 818). The text collection, from which researchers may wish to build a corpus, is changing constantly under their very eyes. For example, a web page on a university's website may, after a few days, show a change in the information provided, or the information may have been moved to another site or disappeared altogether (returning a 404 error message). This methodological dilemma is traditionally resolved by freezing the web page, having the data in a paper-based format and obtaining a permanent electronic form of the web pages that can be analysed in the researcher's study (Mautner, 2005). In this research, I copied the information from the disability service websites and pasted them into a word document in order to have an electronic text copy of the data, much like a paper-based format.

3.4.3. Thematic analysis (used in stages two and three)

According to Lapadat (2010), thematic analysis has not been well described. Thematic analysis is part of a meaning-making process with many methods. It is not a research method in itself but rather a synthesising strategy and an analytical approach. It is a tactic for managing and reducing large volumes of data 'without losing the context' (Lapadat, 2010: 2). Thematic analysis in qualitative research is 'a method for identifying, analysing and interpreting patterns of meaning themes' (Clarke and Braun, 2017: 297). In addition, it 'seeks to unearth the themes salient in a text at different levels' (Attride-Stirling, 2001: 387). It is a systematic procedure for generating themes and codes from qualitative data, with codes being 'the smallest units of analysis that capture interesting features of the data (potentially) relevant to the research questions' (Clarke and Braun, 2017: 297). According to Castleberry and Nolen (2018), coding involves asking specific questions of the data, such as the following: 'What is happening in the text, who are the actors and what are their roles, when is it happening, where is it happening? What are the explicit and implicit reasons? Why it is happening? How is it happening?' (3). In order to ensure that codes are reliably applied throughout the data, the researcher has to develop definitions for each code or group of codes. Researchers can be confident in their coding scheme when no new themes are identified upon reviewing new data.

As explained in the content analysis section above, themes within data can be identified in one of two primary ways: an inductive or deductive approach. A deductive approach strongly links the research themes to the research questions, is driven by a theory and may have an existing coding frame (Hsieh and Shannon, 2005; Braun and Clarke, 2006). This research, however, used an inductive approach to thematic analysis. With this approach, the identified themes are strongly linked to the data. Therefore, no pre-existing coding frame is required. It is data driven.

Researchers conducting thematic analysis look for patterns (themes), topics and ideas that provide insight (Hawkins, 2017). The aim of thematic analysis is to identify patterns (themes) in the data that are interesting or important and to use those patterns to say something about an issue or to address the research. Good thematic analysis does not simply summarise the data but instead makes sense of the data and provides interpretations (Maguire and Delahunt, 2017). Braun and Clark (2006) indicated that two levels are taken to identify themes in

thematic analysis and in qualitative research: the explicit/semantic level and the interpretive/latent level. The first level focuses on the surface/explicit meaning of what is being said by the data it examines, rather than going deeper with the analysis. This level of analysis was chosen in the thematic analysis for stages two and three because this level of analysis can support a response to the research questions. The second level that can be taken to identify themes is a deep analysis. In this case, it examined the underlying assumptions and ideas from the data. This level of analysis was not implemented in this research.

According to Braun and Clark (2006), thematic analysis requires that the following steps be conducted: First, the researcher must familiarise himself/herself with the data. The researcher should have some prior knowledge of the depth and breadth of the content. This involves reading through all the data and searching for patterns and meaning. The first phase requires repeated readings of the data in an active way. This reading of the data must have the aim of searching for meaning and patterns. During this phase, it is important for the researcher to develop ideas for coding. Once this has been done, the researcher is ready to begin the more formal coding process. Second, the researcher must produce initial codes from the data. Coding means organising the data into meaningful groups. The coded data differ from the themes as they are often broader than the codes and themes used when the interpretive analysis of the data occurs. The themes start to be developed after the coding. These are developed with a focus on the data in 'which arguments about the phenomenon being examined are made' (Braun and Clarke, 2006:18). Creating themes means focusing on meaning within the data. Creating themes also means taking 'the numerous pieces of related code to show a bigger picture of what is being portrayed' (Castleberry and Nolen, 2018: 3). The third phase focuses on searching for themes. After developing a list of the various codes, a search for themes will follow. Searching for themes requires one to refocus the analysis on a broader level. It is suggested that the researcher use visual representation to help in sorting the different codes into themes. For example, this can be done through the use of tables, mind maps or writing the name of each code with a brief description on pieces of paper and organising them into themes. Fourth, the researcher must define and name the themes. 'Data within themes should cohere together', and there should be 'clear and identified distinction between themes' (Braun and Clarke, 2006: 20). Finally, the researcher has to make meaning from the data presented as themes. This is at a higher level than the themes.

According to Yin (2015), the goal of all qualitative interpretation – including thematic analysis – is to incorporate the following five qualities. First, the interpretation has to be clear for the reader (e.g. the reader has to be able to follow the analysis procedure). Second, the interpretation has to be fair (e.g. if another researcher was given the same data, he/she would reach the same interpretation). Third, the interpretations should be representative of the raw data and be accurate. Fourth, the interpretation has to add value to the understanding of a phenomenon. Finally, the interpretation has to be credible and answer the research questions. Making meaning of the data means discussing the relationships between themes and answering research questions after the themes have been identified (Castleberry and Nolen, 2018).

Thematic analysis is flexible in terms of sample size, data collection methods and approaches to meaning generation. This flexibility distinguishes thematic analysis from other approaches. However, thematic analysis does not allow the researcher to make claims about the use of language (Nowell *et al*., 2017). In this research, therefore, I have added another kind of documentary analysis – discourse analysis – which is concerned with language use and how the text communicates certain messages rather than being concerned with 'what is said' (Bryman, 2008: 553).

3.5. Comparison studies (stage three)

A comparative design can be defined as examining:

> 'particular issues or phenomena in two or more countries with the express intention of comparing their manifestations in different socio-cultural settings … using the same research instruments either to carry out secondary analysis of national data or to conduct new empirical work' (Bryman, 2008: 58).

In this research, I examined the websites of the disability services and the stated provision for autistic students (the phenomenon) in two universities in two countries (the UK and SA) using the same research instruments (content analysis). Comparative research encourages researchers to look beyond their vicinity, for example, by undertaking research in a new environment, gathering information and understanding phenomena. It requires additional intellectual effort in order to 'understand whether such phenomena are merely curiosities from far away or relevant for us' (Teichler, 2014: 394). Comparative research is a broad concept that refers to the evaluation of the differences, similarities and associations between entities. Comparative research may be conducted in many different types of study, such as

case studies, cross-national comparisons, social groups and geographical or political configurations (Mills, 2008). According to Phillips (2011), 'the making of comparison is fundamental to intellectual inquiry'. Comparison is important in the field of education for examining the features of education provision in diverse contexts (Phillips, 2011). In the case of this study, comparison was important in examining the UK and Saudi university websites in terms of what provisions they claimed to offer to autistic students. Comparing two Saudi and two UK universities helped in identifying the similarities and differences between the two contexts in terms of disability services for autistic students.

The underlying aim of comparative research is to search for variations and similarities between the entities that are the objects of comparison. In this research, the ultimate aim of stage three was to identify the similarities and differences between two Saudi and two UK universities that have provisions for autistic students. In addition, the aim of conducting a comparison study was to create rich and detailed profiles of the various services available and to demonstrate the similarities and differences between autism services in each context (SA and UK universities). The aim was not to determine better or worse; the aim of the comparison was, rather, to identify the differences without making a judgment (better or worse). The problem with making such a judgment is that each university (of the two UK and two Saudi universities) has been influenced by a different culture (either Arabian or Western culture). National cultures influence individuals' reactions to and perceptions of the world (Ali and Azim, 1996). As such, the Saudi and UK universities were influenced by distinct cultures during the designing of their services for autistic students.

Comparative design is considered to have several drawbacks (Bryman, 2008), such as the need to acquire sufficient funding to conduct the research and the need to obtain equivalent numbers during sampling. In this study, funding was not needed due to the small scale of the study and the low cost of the research design (documentary analysis). As the sample was the number of universities, not the number of respondents, and was determined by the researcher, the sample for this stage of the study contained equivalent numbers (two UK universities and two Saudi universities). A strength of comparative design, according to Bryman (2008), is that it allows one to develop a deeper understanding of the similarities and differences between situations and, in this case, to develop a deeper understanding of the similarities and differences between SA and the UK in terms of disability services for autistic students. The purpose of the comparison in stage three of this research was to understand the factors that

have influenced the organization of disability services in the UK and Saudi HE systems and to determine whether the needs of autistic students were considered when the disability services were designed.

3.6. Research ethics

Research ethics is important both in designing a research study and in practice (Farrimond, 2013). As such, ethics are not something to be added as an afterthought. Rather, the consideration of ethics involves an ongoing process that must be acknowledged throughout all research stages (Farrimond, 2013). Research ethics helps the researcher to conduct high-quality research that is able to achieve social goals (Farrimond, 2013). As qualitative research becomes increasingly valued and recognised, it is imperative that it be conducted in a rigorous and methodical manner in order to yield useful and meaningful results (Nowell *et al*., 2017).

Resnik (2011) has summarised important ethical principles that must be considered when conducting research, the first of which is honesty, which includes honesty in reporting data, results, methods and procedures. This principle was implemented in this research, for example, by reporting data honestly in the findings chapter. The second ethical principle is objectivity, which includes avoiding or minimising bias. As an example, in this research, stages two and three were piloted by the researcher in the company of the supervisors of the research in order to reduce bias. The third ethical principle is carefulness, which involves keeping accurate records of research activities, and it was expressed in this study by maintaining records of the correspondence with HESA, which provided the list of UK universities used in the sampling in stage two. Finally, the fourth principle is publishing in order to advance research (Resnik, 2011). The preliminary findings of this research, for example, have already been reported at three different conferences in the UK, Australia and SA.

With regard to the ethical principles related to documentary analysis, a researcher must demonstrate objectivity by fairly representing the research material. However, subjectivity in the analysis of data is likely to occur; thus, the researcher should make the process of analysis as transparent and rigorous as possible (Bowen, 2009; Resnik, 2011). The use of the data in this research will be used for research purposes only. As explained before in (section 3.8.1.1

Sampling for stage one: content analysis), I signed an agreement with HESA confirming that the data would be used only for the purposes of this research. In addition, as the documents analysed were from the public domain, the authors' permission was not required to use the documents. According to Eysenbach and Till (2001), using information that is available in the public domain does not require consent and does not require review by the research ethics board. Moreover, matters such as privacy, confidentiality, anonymity and informed consent are not relevant to this research because no participants are involved. According to Strong and Gilmour (2009) and Warrell and Jacobsen (2014), ethics approval is not necessary for a study that does not include personal information or the involvement of participants. According to Watson *et al*. (2007), research via the Internet is still developing, and ethical concerns will emerge. This research will be publicly available. Sharing results promotes the advancement of knowledge and allows for feedback and criticism as well as the replication of research. (Bishop, 2009; Horner and Minifie, 2011; Borgman, 2012).

3.7. Research quality

Ensuring the quality of the research is important and an ethical matter because it may be used in decision-making by policy makers, governments, funding bodies and parents (Cohen *et al*., 2018). For example, the current research may be used by policy makers in HEIs. In addition, the researcher will have no control over the use of the research after it is in the public domain. Therefore, before its dissemination, the researcher must consider and anticipate the research audience as well as the likely effects of the research. The negative use of research findings is possible and may involve the direct misuse of information through controlling access to the data (Bezuidenhout, 2013). However, researchers should not be required to estimate the magnitude and probability of their research finding's misuse as it is beyond the scope of their capacity (Kuhlau *et al*., 2008; Bezuidenhout, 2013). Documents are often not produced for the purpose of the research. The researcher has to be aware of the purpose, origins and the original audience of the documents when analysing any kind of documents (Mogalakwe, 2006). For example, in this research, the texts and documents that were analysed were written for the purpose of providing information for autistic students in UK and Saudi HEIs.

In order to put the findings of the research into practice, it is important that the research be recognised as legitimate and be understood and familiar to practitioners, other researchers,

policy makers and the general public. This is known as trustworthiness and indicates that the research findings are worthy of consideration (Nowell *et al*., 2017). According to Connelly (2016) and Nowell *et al*. (2017), trustworthiness embraces five criteria: credibility, dependability, confirmability, transferability and authenticity. Credibility implies confidence in the findings of the research as well in the evidence provided to support the findings (e.g. in this research, I provide direct quotations from the original text in order to support the research findings). Dependability refers to the stability of the data under the conditions of the study and over time. As explained before, by nature, websites are constantly changing and therefore, to ensure the stability of this research, all web pages used as data were frozen by having a paper-based and electronic format of them. Dependability also demands that the research process be made clear to the reader. In this research, the processes of conducting the three types of documentary analysis (content analysis, thematic analysis, written discourse analysis) are explicitly explained and described. Confirmability involves keeping detailed notes of all decisions made and of the analysis as it progresses. These notes and preliminary findings may be discussed with others; for example, presenting findings at a conference increases confirmability, allowing the researcher to receive feedback. The preliminary findings of this research were shared at three conferences. A researcher ensures transferability by providing rich, detailed descriptions of the context, location and people studied in the research and by being transparent with regard to trustworthiness and analysis (e.g. in this research, the methodology chapter gives detailed information about the context of the research, such as the sampling and the analysis procedure). Finally, authenticity involves showing a range of diverse realities. Selecting an appropriate sample and providing rich, detailed descriptions of the data are ways of addressing this criterion. Authenticity also involves finding the deep meaning of a phenomenon in order to increase the understanding of it. For example, the discourse analysis in stage two aims to find the meaning behind the language used by the disability service providers when they talk about their services (Connelly, 2016; Nowell *et al*., 2017).

3.8. Implementation

This section presents the sampling procedure and implementation process for stages one, two and three.

3.8.1. Stage One: How are provisions for autistic students presented on the websites of UK and Saudi universities where autistic students are enrolled?

The objective for this stage of the study was to develop a general understanding of how provisions for autistic students are presented by UK and Saudi universities on their websites, including how accessible and easy to navigate the sites are. In addition, this stage also aimed to identify services provided to autistic students to facilitate the next stage of analysis (i.e. written discourse analysis).

The process of evaluating the accessibility of a website can be time consuming. Therefore, software developers have created multiple tools to perform this procedure (as detailed in the literature review, section 2.6.4. web accessibility). However, these tools were not used to assess the accessibility of university websites in the present study for three reasons. First, usage of most of these tools requires experience in computer sciences, and this research is educational in focus. Second, these tools cannot identify all accessibility issues, so additional manual evaluation is needed even if the software is used (Kane *et al*., 2007). Third, most of these tools cannot identify accessibility issues on websites that use languages other than English, and Arabic language is used on the Saudi university websites (Alayed, 2018).

In the following section, the sampling and implementation of this stage (stage one) are described.

3.8.1.1 Sampling for stage one (content analysis)

To identify a study sample, a method must be identified that is appropriate for the structure and goals of the research study. In this research, the purpose of stage one was to better understand how services for autistic students are presented on the websites of UK and SA universities at which autistic students are enrolled. A purposive sampling method was thus required, that is, to select a study sample for a specific purpose with specific sample characteristics (Cohen *et al*., 2018). In this case, for stage one, the purposive sample needed to include UK and SA universities at which autistic students were enrolled.

The first step in determining this sample for UK universities was to obtain a list of the universities for the 2013/14 academic year, which I requested and received from HESA. I

signed an agreement with HESA confirming that the data would be used only for the purposes of this research. This list identified 153 UK colleges and universities (out of a total of 163) that met the one inclusion criterion: must have one or more students enrolled who had declared a disability, specifically, autism, during the period being studied. The data also identified the number of autistic students enrolled at each of these institutions. HESA supplied the requested data in a Microsoft Excel spreadsheet. According to HESA records, students with autistic spectrum disorders were defined by the following two disability codes:

- (10) Autistic Spectrum Disorder, or
- (53) A social/communication impairment, such as Asperger's syndrome or other autistic spectrum disorder.

These codes were applicable in England, Northern Ireland, Scotland and Wales (HESA, 2016). According to email correspondence with the HESA data processing team, it was possible that some autistic students were not included in the numbers because they chose not to disclose their disability.

The same data collected about UK universities was also needed for Saudi universities. The number of autistic students at Saudi universities is not identifiable through the Saudi Ministry of Education website. Therefore, a list of Saudi universities generally was obtained (58). The data was from academic year 2015/16 and included both public and private institutions in SA; this was the most recent list at the time of data collection.

The final sample for stage one thus included 153 UK universities and 58 Saudi universities. These numbers were then later reduced to obtain an appropriate sample for stage two.

3.8.1.2 Implementation of stage one (usability and content analysis)

This exploration was based on information available in the public domain that is supplied by the universities and colleges in both countries. Therefore, the data gathered reflected the way any particular university or college chose to share this information. Following is a detailed explanation of the methods used to search for disability services information on the websites of the study sample universities. Then follows detail of the three types of analysis: a) ranking each university's website in relation to how visible information about disability services was; b) ranking each website for ease of navigation; and c) classifying provision as autism-specific or generic disability provision.

Method used to search for disability services

I used the Google search engine to search for disability services information on Saudi and UK university websites, as Google is the most popular search engine in the world (Biswal, 2017) and, thus, is most likely to be used by prospective students. Based on this search, I ranked the visibility of disability services information on the university websites (this ranking process will be described in b) below). There were some issues associated with using the Google search engine that will be discussed later in this section.

As Evans (2007: 21) stated, 'There is fierce competition amongst competing websites to attract users to their site'. Therefore, organisations that care about the visibility of their websites often look for ways to improve their ranking on popular search engines like Google. A common belief among search engine users is that organisations found among the top results are the best brand in their category and service product (Gunjan *et al*., 2012). This is applicable to any kind of organisation or institution, including HEIs. Google may return many millions of results for each user query, but users look at only a select few (Evans, 2007); according to Jansen and Spink (2006), 73% of search engine users look at only the first page of returned results. Thus, website designers work to improve the ranking and visibility of websites.

Various factors influence page ranking and visibility in a search engine such as Google. Some of these factors are associated with the search engine, some are related to the website's design and, finally, some are related to the behaviour of the search engine user (Evans, 2007; McEvoy, 2015). Google places advertisements at the top of the results page. These advertised websites were not counted when ranking the visibility of disability services information on UK and Saudi university websites. Notably, the details of Google's algorithms are kept secret. According to Isom (2015: 29), 'How Google determines particular search queries and how it chooses what to rank at the top of the search results is unclear'. However, some methods for improving visibility are known. For example, website visibility can be improved by the website designer's 'meta description', which summarises a page's content; also, good titles can make the website appear on the first page of Google's search results (Newstex, 2012). In addition, it is possible to improve a web page's rank by understanding which page design choices and factors are valued by the ranking algorithms (Su *et al*., 2010: 50). Implementing search engine optimisation (SEO) can also improve the ranking of a website.

SEO is 'a strategical technique to take a web document in top search results of a search engine' (Gunjan *et al.*, 2012: 206). SEO is the process of improving the quality and volume of traffic on a website that emanates from search engines. It involves using key words to improve the chance of the search engine finding the website (Maley and Baum, 2010). Also, inbound links from authoritative sites can dramatically improve a website's credibility, visibility and ranking.

The behaviour of Google's search engine users can further influence the visibility of websites. Google search results vary dramatically when the user changes browser, device, geographical location or login status in a Google account. Therefore, to reduce this possible bias, I used the same browser (Apple Safari) and device (laptop) in the same geographical location and was not logged in to my Google account when searching for disability services websites. Controlling my behaviours when using Google was important in order to reduce bias and increase the trustworthiness of the findings. Another issue related to using the Google search engine is that it offers results based on prior searches (McEvoy, 2015). For example, if I searched for disability services at the University of Exeter, Google will remember my key words and make the result visible to me, especially if I do not clear my cache and cookies. In order to avoid such issues while ranking the visibility of disability services information on HEI websites in this study, I only did my search for each university once and never revisited the webpage again during the process of ranking website visibility.

To search for disability services information on UK and Saudi university websites, different key words were used according to commonly used references for each country. The key term used to search for disability services information on the UK university websites was *disability services* along with the university name e.g. Bath Spa University. For Saudi universities, the key search term was *special needs* along with the university name (e.g. King Saud University AND special needs). The term *disability* was chosen for the UK search because that term is used in the Equality Act (2010), with which UK HEIs must comply. *Disability services* was used as a key search term because it is the term UK universities commonly use to refer to services provided for disabled students. (For example, the term disability services was used on the website of Newman University and University of Worcester; Newman University, 2017; University of Worcester, 2017).

The term *special needs* was more common and acceptable in Saudi HEIs at the time the data were collected. For example, it is used on the website of KSU, which was the first university to establish a special needs centre in SA (KSU, 2018). The name of each university was entered in Google's search box, followed by the word *AND,* then followed by the words *special needs*. The search for the Saudi disability services websites was conducted using Arabic language.

In the following section, a description is provided of the three criteria and methods on which SA and UK university websites were evaluated during stage one: visibility of disability services on the websites, ease of website navigation, and type of provision for autistic students (autism-specific or generic disability support).

a) Ranking each university's disability services website in in terms of visibility

Visibility of information is important because it is one indication of how easy it is for website visitors to access disability services information. In this stage, I ranked the visibility of the disability services websites of UK and Saudi universities.

UK universities and colleges

The ranking for visibility of disability services information on the websites of each of the 153 UK universities was conducted as follows: after entering 'disability services' and the 'university name', as explained in the previous section, I scrolled down to avoid advertisements; then, if the service was listed among the top six search results, the disability services information was ranked 'highly visible'. The highly visible UK websites were limited to the top six search results because that was the number of results that could be seen on the results screen without scrolling down and hence, was the most visible. If the disability services information was found on the first page of the Google search results but was not among the top six results, the website information was identified as having 'average visibility'. If the service did not appear on the first page of the Google search, it was considered 'low' in terms of visibility. If the Google search revealed the website information on disability services for any college or university had average or low visibility, visibility of that institution's website information was ranked again through a search of the university's own website, so a second level of ranking was conducted for the UK disability services websites assessed as having average or low visibility within the first ranking.

When searching the UK universities' websites for the second ranking of the average and low visibility websites, the term *disability services* was entered into the search box of the institution's website. If the disability services information was found on the first page of the search results, the services information was ranked 'highly visible'. When the search did not reveal any results for the disability services information, or when there was no search box on the website, links to 'student support' and 'disability services' were followed. If that did not lead to information about support for students with disabilities, other links relevant to student support, such as the university's policy and guidelines for students, were followed. If disability services information was found through a student support link, the site was ranked as having 'average visibility'. If the disability services information was found somewhere else on the university's website, visibility was considered 'low'. Visibility was also ranked low when students with disabilities were included with other students in the provision of general student support. Sometimes, disability services were completely invisible on the university's website. In this case, the Google search only was used for ranking the visibility of the website. The visibility of a university's website could depend on its search engine and on other factors, such as the website's design. However, investigating the reasons for a website's visibility was not the focus of this process.

Saudi universities and colleges

The search for disability services information on the Saudi universities' websites was conducted similarly through the use of a Google search, supplemented by a search of the universities/colleges' own websites. Although all the universities' websites are available in both languages (Arabic and English), the search for disability services was conducted in Arabic because some text on the websites may not be translated into English. Usually, universities make their websites available in different languages to market themselves and to inform readers regarding what they do as a provider.

If the service was among the top six search results in the Google search, the special needs centre information was considered 'highly visible'. The highly visible services were limited to the top six search results because that was the amount that could be seen on the screen without scrolling down and, hence, was the most visible. If the special needs centre information was found on the first page of the Google search results but was not among the top six search results, the services information was deemed as having 'average visibility'. If

the service did not appear on the first page of the Google search, its visibility was considered 'low'. If the search with the Google search engine revealed the disability services information to be of average or low visibility, the visibility was ranked a second time according to a search of the university's own website. As with the UK universities, a second level of ranking was conducted for the disability services websites that were rated 'average' or 'low' in their visibility.

The university website search boxes facilitated the examination of the Saudi university providers' websites. The term *special needs* was used for the search as explained in the previous section. If the disability services information was found on the first page of the results when searching the college or university website, the website information was ranked 'highly visible'. When the search did not reveal any results for the disability services, or when there was no search box on the website, the website's links were used. Links to the Dean of Student Affairs were followed, and then Deanships Unit, as this usually includes a unit for students with special needs. If there was no information about support for students with disabilities, other links relevant to student support were followed, such as the university's policy and guidelines for students. If disability services information was found through the deanship link, the website had 'average visibility'. If the disability services were found somewhere else on the university's website, visibility was ranked 'low'. Table 2 provides a summary of how the visibility of disability services information on the Saudi and UK universities' websites was ranked.

Table 2: Summary of how the visibility of disability services information was ranked in both Saudi and UK universities

The visibility of disability services information	Google search	The provider's website
High visibility	Among the top six search results	The first page of the search in the provider's website
Average visibility	The first page of the results but not among the top six search results	The student support link or the deanship link
Low visibility	Not on the first page of a Google search	Somewhere else in the university's website, or the students with disabilities are included with other students in the provision of general student support

b) Ranking websites for ease of navigation

After locating the disability services information on the university's website, the ease of navigation within the website was examined. In order to do this, the text explaining disability services for autistic students on the universities' websites was closely examined, while noting how easy it was to navigate around the websites.

Tarafdar and Zhang (2005) emphasised the importance of websites being easy to navigate, which refers to the way website content is arranged and organised. In practice, and in this research, ease of navigation was related to the ease of accessing information by the number of links that the users need to visit in order to access certain information. The ease of navigation of disability services websites was categorised in this study as 'excellent navigation,' 'average navigation,' or 'low navigation.' To draw this distinction, each classification was given a definition based on the overall organisation of information and the number of links users were required to visit in order to access the website's content. Excellent navigation websites were those with links that lead directly to specific information. A click on one link lead directly to the information the researcher was looking for (e.g., a link entitled 'academic support' lead to information about this kind of support). Meanwhile, the average navigation websites were those that organised information in categories and did not have dead links, but required the user to click on more than one link to locate specific information. Figure 2 is an example of this. 'Academic support' is here broken into three components: 'disability library and learning services,' 'coursework and examinations,' and 'finding a learning development advisor.' This site's ease of navigation was average because

the three links could have been grouped together for easier navigation of the disability support website. Lastly, the low-navigation websites contained links that did not lead directly to information due to dead links and errors in the webpages.

Figure 2: An example of a webpage rated as having an average ease of navigation. Here, academic support is broken into three components, which means visitors must click on 2 to 3 links to locate certain information.
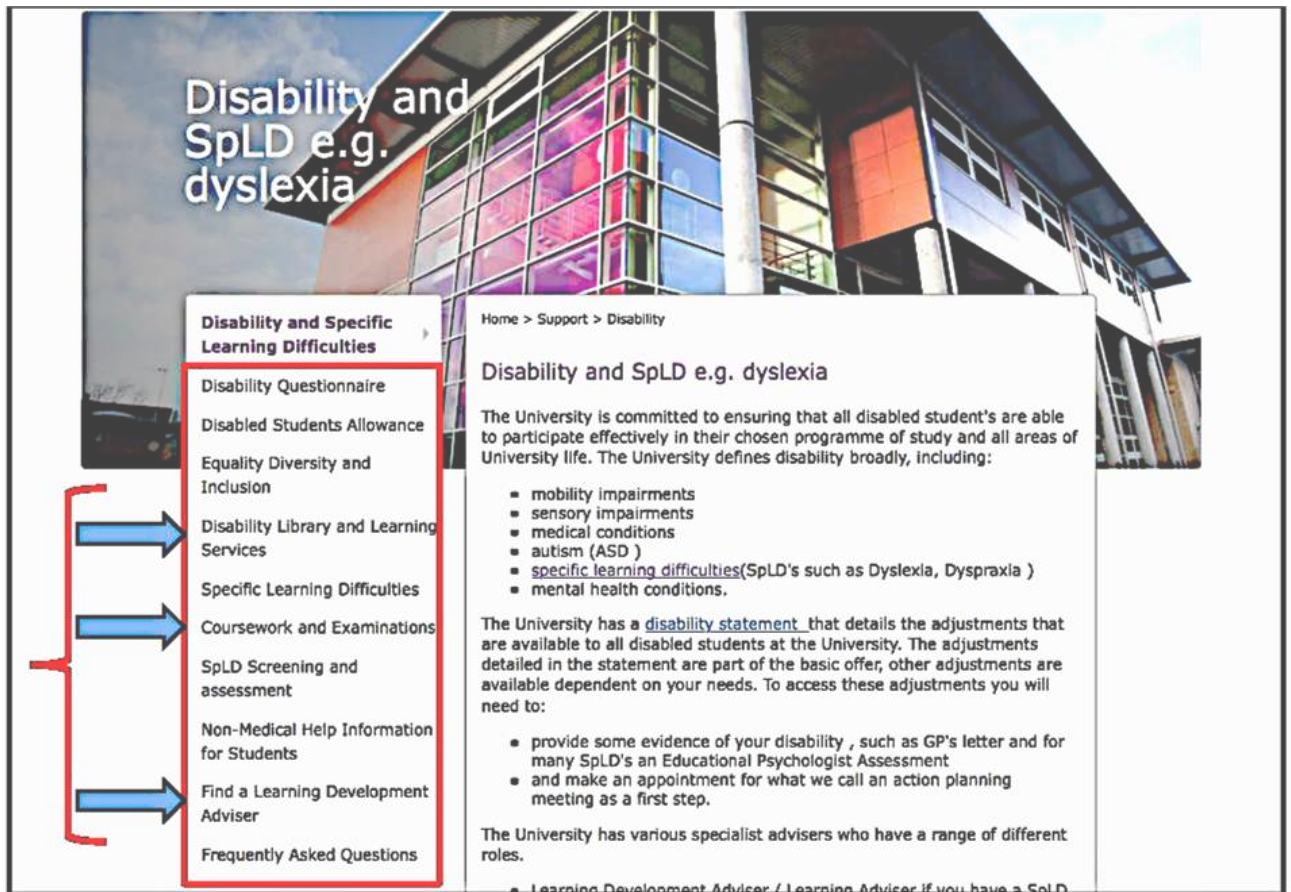
c) Classifying provision as autism-specific or generic disability provision

Next, the disability services provisions identified on the website were closely investigated to identify the type of provision, if any, designed specifically for autistic students and to classify the services offered according to whether they were autism-specific or generic disability support. This was carried out for both UK and Saudi universities.

UK universities and colleges

Autism-specific means that the university website indicated that the university had adopted specific provisions for including autistic students or had created an initiative for these

students, such as a lunch club or a summer programme for transition. It could also mean that disability services mentors or advisors with special training in the field of autism were employed at the institution. In addition, the institution may have developed guidelines for staff, peers or autistic students or adopted guidelines from external organisations. Some institutions claimed that their provisions were 'autism-specific'; however, the content of their services seemed to relate to generic disability support. In such cases, the provision was described as generic disability services.

For the UK universities, generic disability services meant that autistic students were not mentioned specifically in the disability provisions available for disabled students at the university. It could also mean that while the disability services mentioned that they could support autistic students, the content of the provision did not reflect that. For instance, one site indicated that autistic students were eligible for the DSA and that they could request academic support and examination arrangements. These are the minimum provisions that any disabled student would be eligible for and, thus, not specific to autistic students.

Appendix 1 is a screenshot of how the data were organised based on the content analysis of the UK universities. Appendix 1 includes the visibility of the disability services information, ease of navigating the website and types of provisions available for autistic students.

Saudi universities and colleges

In the Saudi universities, autism-specific services meant that autistic students were mentioned in the disability services provisions referenced on the website. In addition, they were mentioned in the services offered to students with disabilities from admission to graduation. This included academic support, financial support, supportive faculty, raising awareness about autism and holding training workshops.

Classifying services as generic disability support in the Saudi universities meant that autistic students were not mentioned in the disability provision for students with special needs or that the university had not established a disability unit or centre for disabled students. This meant that all students with special needs, including autism, had access to the general student support supplied for all students enrolled at the university.

Appendix 2 is a screenshot of how the data were organised based on the content analysis of the Saudi universities. Appendix 2 includes the visibility of the disability services information, ease of navigating the websites and the kinds of provisions available for autistic students.

3.8.2. Stage Two: What discourse seems to be communicated on the disability services websites of UK and Saudi universities where autistic students are enrolled and what kind of services seem to be available for them?

3.8.2.1 Sampling for stage two (written discourse and thematic analyses)

This stage focused on university websites that stated that autism-specific services were provided; university websites where only generic disability services seemed to be provided for these students were excluded. The aim of this stage was to carry out in-depth discourse and thematic analyses of these websites.

In total, 33 UK universities were identified as providers of autism-specific services, according to the results of the stage one analysis. This initial population, therefore, constituted a purposive sample, meaning that the units/elements met certain characteristics or criteria (Lewis-Beck *el al.,* 2004). In the case of this research, the criterion they met was that the universities provided autism-specific services.

To achieve a reasonably sized sample in order to undertake an in-depth analysis within the limited timeframe of this research project, a further sampling step was implemented. To reduce the initial sample total of 33, those 33 universities were divided into nine categories according to the two dimensions of visibility and ease of navigation from the stage one analyses (see Table 3). This showed an uneven distribution across the nine possible cells, including four empty cells (excellent navigation/average visibility; average navigation/low visibility; low navigation/high visibility; low navigation/average visibility). In order to maximise variation across the two dimensions and maintain a workable sample, the following decisions were made:

1. Include all universities in the three cells where there were two or fewer universities (excellent navigation/low visibility; average navigation/average visibility; low navigation/low visibility), for a total of four universities. This is known as boosted sampling, which is a variant of purposive sampling. As Cohen *et al.* (2018) state, a

boosted sample includes those who may be underrepresented or excluded because so few of them exist.

2. Include approximately one third of the universities in the remaining two cells (thus 6 out of 19 in the excellent navigation/high visibility cell and 3out of 10 in the average navigation/high visibility cell) to make the sample manageable whilst still maintaining a sample which, to some extent, represented the larger numbers in these cells.

3. Use simple random sampling (selecting the names of the universities out of a box) to select six universities from the excellent navigation/high visibility cell and three universities from the average navigation/high visibility cell. Simple random sampling ensured that each university had the same probability of being selected (Lavrakas, 2008; Cohen *et al.*, 2018).

The selected universities are indicated in bold in Table 3.

Table 3: Groupings of the 33 UK universities that offer autism-specific provisions based on (1) the visibility of the disability services information during the search and (2) ease of navigating the website

	High visibility	Average visibility	Low visibility
Excellent navigation	(19 universities) **Bath Spa University** Queen's University of Belfast University of Cambridge University of East Anglia University of Edinburgh University of Essex University of Glasgow Heriot-Watt University **University College London Institute of Education, London (UCL IOE)** Loughborough University University of Newcastle-upon-Tyne **Newman University** University of Nottingham University of Oxford University of Reading **University of Surrey** **University College London (UCL)** University of the West of England, Bristol **York St. John University**		(2 universities) **University of Leicester** **Nottingham Trent University**
Average navigation	(10 universities) University of Birmingham University of Chichester **University of Huddersfield** University of Plymouth **University of Sussex** Teesside University University of Worcester **University of Derby** Imperial College London, Technology and Medicine University of Keele	(1 university) **Glasgow Caledonian University**	
Low navigation			(1 university) **University of Kent**

As with the UK universities, the first method of sampling for the SA universities was purposive sampling, according to whether the university disability services website stated that autism-specific services were provided. Out of the 10 SA colleges and universities that indicated that they provided services to disabled students on their websites, the websites of only two stated that they offered autism-specific provisions (KSU and KAU). Thus, these two comprised the Saudi university sample for stage two.

Therefore, the overall sample for stage two included 13 UK universities and two SA universities.

3.8.2.2. Implementation of stage two (written discourse analysis and thematic analysis)

Following is a detailed explanation of how the discourse analysis was piloted and how it was implemented. In addition, there will be an explanation of how the thematic analysis approach for stage two was implemented.

a) Developing and piloting the discourse analysis approach

Initially, an analytical tool was created for the written discourse analysis. The purpose of this tool was to devise a strategy for the analysis. In this stage, a document was selected from each of the three UK university disability services websites that were not part of the final sample in stage two. The Saudi universities were excluded from the piloting process because there were only two universities that seemed to provide autism-specific services and they were already selected for the stage two sample.

The three disability services websites were purposively selected using the following selection criteria: First, the disability services included an autism-specific provision: 33 UK universities met this criterion as detailed above, while 13 universities were excluded because they were part of the final sampling of stage two; therefore, 20 universities remained for the pilot analysis for stage two. In order to further reduce this number to arrive at a small and manageable sample of universities, a second criterion was added, namely, the information about the autism-specific provision was produced by the university as a separate written document, which was available through a link on the disability services website. This second criterion was established to examine coherent written documents. Three universities met these criteria (Keele University, Imperial College London and University of Nottingham).

In order to develop the analytical tool for the written discourse analysis, the researcher and the supervisors individually conducted pilots for the written discourse analysis using the same document. In discussing these, it seemed that each person's approach led to a slightly different understanding of what the text said. Approach one from the first supervisor tended to focus on 'messages' and 'assumptions', approach two from the second supervisor tended to focus on 'form', which means the use of language, and the researcher focused more on 'messages'. The three approaches were combined so that one common approach was produced for the analysis using three analytical units ('messages', 'assumptions' and

'form'). These initial analytical drafts were discussed and, the similarities and differences having been considered, each of the three approaches contributed a significant focus related to one aspect of the discourse analysis. Therefore, a combination of these gave strength to the discourse analysis.

For example, Keele University's text was coded for the discourse analysis using three different colours (see Appendix 3): red for 'messages', green for 'assumptions' and blue for 'form'. Then, after this coding procedure was applied, the three UK universities were coded using the analytical units ('messages', 'assumptions' and 'form') and using suggested analytical questions that emerged from the supervisors and the researcher's discussion to consider the apparent meaning of the texts. Many codes emerged from applying the analytical questions to the text on the websites. The analytical questions and codes are presented in Tables 4, 5 and 6.

Table 4: Piloting: The analytical unit 'Messages'

The analytical unit: Messages—What messages seem to be communicated in the text?		
How is the understanding of autism communicated in the text?	How do disability services providers seem to view autistic students?	How do disability services providers work with autistic students, and how is this communicated in the text?
Code 1: Communicating an understanding of autism in terms of its impact on students	Code 1: Considering autistic students as receivers of support	Code 1: Fostering the disclosure of autism
Code 2: Communicating an understanding of autism in terms of the services autistic students are presumed to need	Code 2: Considering autistic students as partners in the process of providing disability services	Code 2: Communicating teamwork within the university and with outside organisations
	Code 3: Viewing autistic students in terms of their abilities/disabilities and difficulties	Code 3: Providing broad or limited disability services
		Code 4: Listening to students' voices

Table 5: Piloting: The analytical unit 'Assumptions'

The analytical unit: Assumptions—What assumptions are made about autistic students and the services provided for them?		
What assumptions are made about autistic students?	What assumptions are made about services for autistic students?	
Code 1: Assuming that autistic students have support needs	Code 1: Assuming that autism comes with an added cost to the individual	
Code 2: Assuming that autistic students have 'issues' in certain areas		

Table 6: Piloting: The analytical unit 'form'

The analytical unit: Form—What form do the messages take?
What form does the message take?
Code 1: Using quotes from students and parents
Code 2: Using an advertising tone
Code 3: Using an encouraging tone
Code 4: Using an advisory tone
Code 5: Using an empathetic tone
Code 6: Using an uncertain tone
Code 7: Using an imperative tone
Code 8: Using questions to frame information
Code 9: Form of the language used to refer to autistic students
Code 10: Using reassuring tone of voice

It was noted that the data should be organised to facilitate writing about the findings, therefore, an Excel file was used to organise the data (see Appendix 4).

b) Implementation process for the written discourse analysis

After creating the analytical tool in the piloting of the data analysis process for stage two, the written discourse analysis was carried out for the 15 universities' website text was conducted manually due to the small scale of the data. The documents and the webpages used in this discourse analysis were downloaded from the disability services websites for each university. They were then converted to word documents rather than saving in PDF format. The coding was conducted electronically. Black font was used for the original text, then different colours were used to represent each code that emerged that belonged to each analytical unit; the

analytical unit 'messages' were in red font, the analytical unit 'assumptions' were in green and the analytical unit 'form' was given blue. The statements in the original text might be coded as an example of one or more analytical units. Once the original texts were coded, the coded data was organised in a Microsoft Excel spreadsheet (See Appendix 5 which is a screenshot of the Excel file which was used to organise the findings of the discourse analysis). The spreadsheet helped in organising the data and in writing the findings of this research because the researcher can look at the 15 universities in relation to each code. It was anticipated that the codes might be broken down into more detailed codes as additional universities were included in the analysis (See tables 7, 8, 9). For the analytical unit 'messages', the main analytical question was: What messages seem to be communicated in the text? (See table 7) For 'assumptions' the main analytical question was: What assumptions were made about autistic students and the services provided for them? (See table 8) The question for the analytical unit 'form' asked: What form does the message take? (See table 9) These questions seemed helpful in uncovering the hidden meaning and in understanding the meaning and discourses that underpinned the texts. Many codes emerged from the analytical questions, and examples from the original texts were used to show evidence of each code and, therefore, of the analytical units. In writing about the findings, the similarities and differences between universities were highlighted and evidence was provided.

Table 7: The analytical unit 'Messages': What messages seem to be communicated in the text?

The analytical unit: Messages: What messages seem to be communicated in the text?			
How is an understanding of autism communicated in the text?	How do disability services providers seem to view autistic students?	How is the inclusion of autistic students communicated in the text?	How do disability services providers work with autistic students, and how is this communicated in the text?
Code 1: Communicating an understanding of autism by giving a definition or description of autism	Code 1: Considering autistic students as receivers of support	Code 1: Communicating perspectives on inclusion	Code 1: Providing training for staff and peers
Code 2: Communicating an understanding of autism in terms of its impact on students	Code 2: Considering autistic students as partners in the process of providing disability services	Code 2: Communicating educational placement and provisions	Code 2: Communicating that no two students are alike
Code 3: Communicating an understanding of autism in terms of the services autistic students are presumed to need	Code 3: Viewing autistic students in terms of their abilities/disabilities and difficulties		Code 3: Fostering the disclosure of autism
			Code 4: Communicating teamwork within the university and with outside organisations
			Code 5: Providing broad or limited disability services
			Code 6: Listening to students' voices

Table 8: The analytical unit 'Assumptions': What assumptions are made about autistic students and the services provided for them?

The analytical unit: Assumptions: What assumptions are made about autistic students and the services provided for them?	
What assumptions are made about autistic students?	What assumptions are made about services for autistic students?
Code 1: Assuming that autistic students have support needs	*Code 1: Assuming that autism comes with an added cost to the individual*
Code 2: Assuming that autistic students have 'issues' in certain areas	

Table 9: The analytical unit 'Form': What form does the message take?

The analytical unit: Form: What form does the message take?
What form does the message take?
Code 1: Using quotes from students and parents
Code 2: Using an advertising tone
Code 3: Using an encouraging tone
Code 4: Using a welcoming tone
Code 5: Using an advisory tone
Code 6: Using an empathetic tone
Code 7: Using an uncertain tone
Code 8: Using an imperative tone
Code 9: Using a promising tone
Code 10: Using a segregating tone
Code 11: Using questions that show empathy, knowledge about autism and questions to frame information
Code 12: Form of the language used to refer to autistic students
Code 13: Using specific terms to refer to autism provisions

c) Developing the thematic analysis approach for stage two

As indicated above in the methodology chapter, thematic analysis was performed in stages two and three; the thematic analysis conducted in this stage (stage two) was data driven (inductive thematic analysis). The thematic analysis for this stage was directly conducted using the original (unannotated) text from the 15 Saudi and UK universities. I followed the steps provided by Braun and Clark (2006) in their study. First, I familiarised myself with the information by reading and re-reading the data and bearing in mind the research question that guided this analysis: What provisions are available for autistic students, according to the university's website? Second, I generated initial codes; for example, the statement *'special exam arrangements'* (Bath Spa University, 2017) was coded as (Code: exam arrangements). Each of the 15 texts were annotated using initial codes, adding to the annotations/codes from the discourse analysis. The initial codes were assigned the colour orange to distinguish this thematic analysis from the discourse analysis colours. 13 initial codes were generated. Third, each initial code was listed in a table, and the code was identified as 'exists' or 'does not exist' within each university's text by using the tick symbol ($\checkmark$) or the cross symbol (X) (See Appendix 6). Fourth, similar codes were brought together to create sub-themes and each sub-theme was then given a definition; for example, the codes 'early move into halls' and 'transition services' created the sub-theme 'transition support', which was defined by the researcher as 'transition services refer to the support that the universities claim to offer before

the start of the student's course at the university'. Finally, the sub-themes were brought together to create themes. For example, the sub-themes 'transition support', 'admission services', 'assessing academic needs', 'individual academic plan' and 'financial support' created the theme 'support before entering the university'. This theme was then also defined by the researcher, in this case, as 'the support that the universities claimed to provide in the time between secondary school and higher education' (See Appendix 7). Similar to the discourse analysis, I considered that using an Excel file to organise the codes, sub-themes, themes and evidence from the original texts for each university was necessary as a preparation for considering the findings (See Appendix 8).

3.8.3. Stage Three: How are disability services organised at two Saudi and two UK universities?

For this stage three different sections are presented: 1) the sampling procedure for stage three, 2) the piloting and implementation of the content analysis, and 3) discussion of the thematic analysis implementation.

3.8.3.1. Sampling for stage three (content and thematic analyses)

According to Teddlie and Yu (2007), purposive sampling can be used in several types of research, including research that requires comparisons, which was the case in this stage. A variant of purposive sampling is known as criterion sampling (Cohen *et al*., 2018). For this stage three comparison, two universities were purposively chosen from each of the UK and SA.

The following criteria were applied, initially to the 58 Saudi universities for the academic year 2013/2014:
- Had a disability services centre within the university;
- Offered specific services for autistic students.

Only two Saudi universities (KSU and KAU) met these criteria.

The same criteria were applied to 163 UK universities for the academic year 2013/2014 (leading to 33 universities) and to attempt to arrive at a similar sized sample two additional criteria were used

- The university must have had students with autism enrolled during the 2013/2014 academic year according to HESA records.
- The university must have online documents (e.g. guidelines, brochures) about how the university supports autistic students in the university.

These additional criteria were useful for two reasons: first, they reduced the number of universities in order to attempt to reach an equivalent number of universities for Saudi and the UK. Second, the criteria helped to ensure that the data would include detailed information about support for autistic students. 10 UK universities met all four of these criteria. To reduce this number further in order to obtain an equivalent number of UK universities to the Saudi universities, two universities were randomly selected (by picking names out of a box) from these 10. Each member of the population under study, that is, each of the 10 universities, had an equal opportunity to be selected (Cohen *et al*., 2018). The universities in bold type in table 10 are those included in the final sample for the UK universities in stage three.

Table 10: The 10 UK universities that met all four criteria

UK HE provider
The Open University
The Queen's University of Belfast
Staffordshire University
University of South Wales
University of Plymouth
Sheffield Hallam University
University of Ulster
Teesside University
The University of Kent
The University of York

The universities in bold type are those which were randomly selected to be included in the final sample for stage three.

In sum, two universities each from the UK and SA formed the sample for stage three.

3.8.3.2. The implementation of the content analysis for stage three

In order to conduct this deductive content analysis, I identified a list of services (categories):
- Inclusive policies
- Transition services
- Financial aid
- Faculty/staff training
- Disability advisor
- Mental health support
- Academic support
- Peer mentors
- Social-behavioural support

This list of services (categories) were the services mentioned in the literature review chapter (see section 2.2.2 'Services for autistic students in HE' and section 2.3. 'The nature of autism services and support in the UK HEIs'). I coded the text of the four universities (2 Saudi and 2 UK universities) using these categories and the colour purple to distinguish the codes from the original text, which was in black font (See Appendix 9). Services/categories were apparent that did not fit into these codes, for example, text about assistive technology. The text that mentioned services that were not in my list were not coded because this is a deductive content analysis that focuses on predetermined categories.

In the findings chapter a table was used to show the existence or not of each category in each of the four universities, similar to that used in stage 2. An Excel file was also developed in order to organise the data after coding using the categories mentioned above for the ease of considering the findings (See Appendix 10)

3.8.3.3. Implementation of the thematic analysis in stage three

Stage three involved the inductive thematic analysis. The analysis was directly conducted—without piloting—using the original text of the four Saudi and UK universities to code the data. Braun and Clark (2006), suggested the following steps in their study which was adopted in the current research. First, I familiarised myself with the information by reading and re-

reading the data and bearing in mind the research question that guided the analysis: What influences seem to shape how disability services are organised at SA and UK universities?

Second, I generated initial codes (See Appendix 11); the initial codes were recorded in the colour blue to distinguish this analysis from the content analysis colours (See Appendix 9); for example, the statement *'our focus is on you as a learner and your individual needs to access your studies'* (Sheffield Hallam University, 2015b) was coded as: (Code: Student focused services). Third, each initial code was listed in a table, and the code was identified as 'exists' or 'does not exist' within each university's text by using the tick symbol ($\sqrt{}$) or the cross symbol (X). Fourth, similar codes were brought together to create sub-themes. Each sub-theme was given a definition; for example, the codes 'Data Protection Act 1998', 'Equality Act 2010', 'Care for Disabled System 2000' and 'United Nations Convention' created the sub-theme 'Legislation'. This sub-theme was defined by the researcher as being 'about the influence of national and international policies on the organisation of disability services' (See Appendix 12). Finally, the sub-themes were brought together to create themes (See Appendix 12). Two themes emerged: external influences and internal influences of disability services. The external influences were defined as 'influences that are external to the universities. External influences include the country's culture, policies passed by the government, disability discourses and external bodies'. The internal influences were defined as 'influences that are internal to the university, which includes the university's strategic plan, organising disability services based on the type of disability and disability services teams'. For the institution's values and inclusive practices, again an Excel file was developed to organise the codes, sub-themes, themes and evidence from the original text for each university as a preparation for considering the findings (See Appendix 13).

3.9. The role of the researcher

All research is subject to researcher bias (Morrow, 2005). According to Creswell and Creswell, (2017) and Morrow (2005), the personal experience of the researcher in qualitative research has the potential to lead to bias when collecting and interpreting data. Morrow (2005) indicated that qualitative researchers 'acknowledge that the very nature of the data we gather and the analytic process in which we engage are grounded in subjectivity' (Morrow, 2005: 254). However, the researcher may work to manage, control or limit subjectivity, although awareness of one's predispositions, assumptions and implicit assumptions and

setting them aside to avoid having them influence the research might be a difficult task (Morse *et al*., 2001; Morrow, 2005; Husserl, 2012). According to Hill *et al*. (2005) and Morrow (2005), one method of reducing subjectivity is to consult with others. This method was explicitly used in stage two of this research. As described earlier in this chapter, the written discourse analysis was piloted with the supervisors of this research. A further method used to attempt to reduce subjectivity in stage one of this research, was through setting criteria in order to draw a distinction between 'excellent', 'average', and 'low' when ranking website visibility and navigation as explained in detail earlier in this chapter.. Further, in stage two of this research, subjectivity was reduced by creating an analytical tool for written discourse analysis. During the first phase of developing this tool, the researcher and the supervisors individually conducted pilots using the same document. The aim of this exercise was to test how robust this emerging tool was when applied to a range of different texts.

3.10. Summary of the chapter

This chapter provided an explanation of the methodological frameworks adopted for this research, the sampling procedure, data collection methods, data analysis procedures, ethical considerations and the role of the researcher. Using different documentary analysis types (content analysis, thematic analysis and discourse analysis) provided the necessary analysis to address the research questions which will be presented in the next chapter.

CHAPTER 4: Data Presentation and Findings

4. Introduction

This chapter presents the findings of three stages of data collection and responds to the relevant stage research questions. As a reminder, figure 3 shows the stages of the research study and table 11 details the research questions, aims, research study stages and types of documentary analysis used for each research question.

Figure 3: Stages of the research study

Stage 1: Usability and content analysis of 153 UK and 58 Saudi universities' disability services' websites

Stage 2: Written discoures analysis and thematic analysis of 13 UK and 2 Saudi universities' disability services' websites

Stage 3: Thematic analysis and content analysis to compare 2 SA and 2 UK universities' disability services' websites
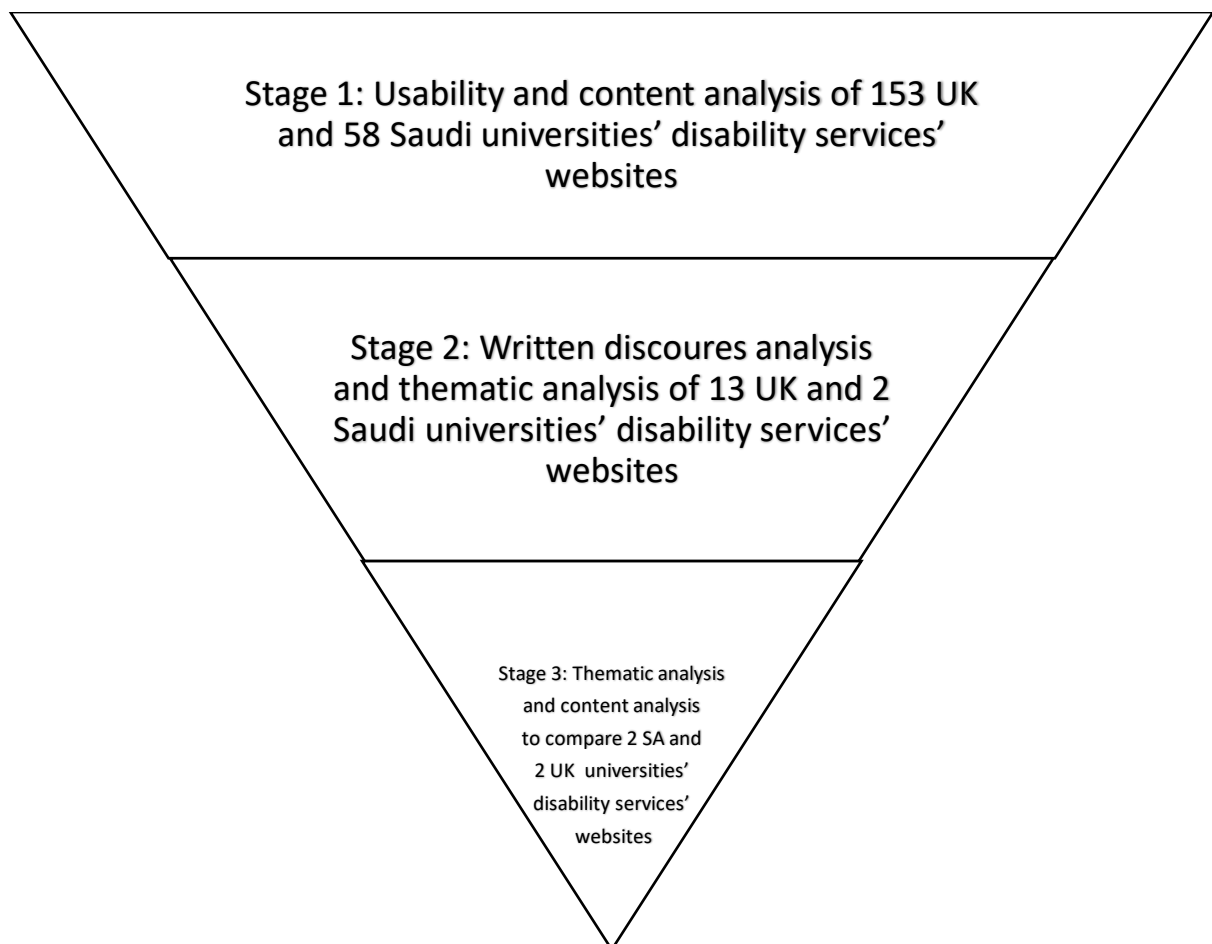
Stage one, working with the largest sample, considered how disability services provision for autistic students is presented on universities' websites, how a student with autism might access information about support on the university website focussing on ease of navigation,

web visibility and how well targeted support seemed to be to the specific needs of students with autism. Stage two looked at a smaller number of websites in more detail by considering the language that is used to share this information; also it focused on what kind of provisions the universities claim to offer to autistic students. Stage three considered similarities and differences between two Saudi and UK universities in terms of disability services for autistic students and the influences that seem to shape the organisation of these services.

Table 11: The research questions, aims, research study stages and types of documentary analysis used for each research question

Stage one: How is the provision for autistic students presented on university websites in the UK and SA that have enrolled autistic students)?		
Sub-questions	**Aims**	**Type of documentary analysis**
How visible are the disability services?	To develop a general understanding of the accessibility of information about disability services available to autistic students	Usability
How is the ease of navigation of the websites?	To develop a general understanding of the ease of navigation of information about disability services available to autistic students	Usability
Is the presented provision generic or autism-specific?	To identify provision types in order to continue on to the next stage of analysis (written discourse analysis)	Deductive Content analysis
Stage two: What discourse seems to be communicated on the disability services websites in the UK and SA (where autistic students are enrolled)? And what kind of services seem to be available for them?		
What messages seem to be communicated in the text?	To uncover the meaning that underpins the text (the messages within the text)	Inductive Written discourse analysis
What assumptions are made about autistic students and services for them?	To uncover the meaning that underpins the text (assumptions and beliefs present in the text)	
What form does the message take?	To understand the language that is used when communicating autism provisions	
What provisions are available for autistic students, according to the university's website?	To discover what provisions the universities claim to offer to autistic students	Inductive Thematic analysis
Stage three: How are disability services organised at SA and UK universities?		
What are the similarities and differences between the two Saudi and two UK universities in terms of disability services for autistic students?	To understand the differences between the UK and Saudi contexts in terms of disability services for autistic students	Deductive Content analysis
What influences seem to shape how disability services are organised at SA and UK universities?	To understand the influences that seem to shape the organisation of disability services	Inductive Thematic analysis

4.1. Data presentation for stage one (content analysis): How are provisions for autistic students presented on the websites of UK and Saudi universities (where autistic students are enrolled)?

Tables 12 and 13 show the numerical analysis and findings for stage one. Table 12 presents the number of the UK HE providers and the number of autistic students in the academic year 2013/2014. The search method results for disability services at UK universities for the academic year 2013/14 show that a Google search found most of the disability services' websites with 68% being on the first page of the search results. On the other hand, around a third (32%) of the disability services websites did not appear on the first page of the Google search, and it was, therefore, necessary to use the provider's website. This result suggests that visitors or potential students could easily locate information about disability services at most UK universities.

Table 12: Numerical analysis of the autism provision on UK universities' and colleges' websites

The unit	Number	Percentage
The number of UK HE providers	153	-
The total number of students with autism in the UK HE providers (2013/14)	5941	-
The number of disability services that were found through Google search	104	68%
The number of disability services that were found through the provider's website	49	32%
The number of websites with highly visible disability services	120	78%
The number of websites with moderately visible disability services	14	9%
The number of websites with disability services low in terms of visibility	19	12%
The number of websites with excellent navigation	48	31%
The number of websites with average navigation	77	50%
The number of websites with low navigation	28	18%
The number of HE providers' websites with generic disability services rather than autism-specific	120	78%
The number of HE providers' websites with autism-specific services	33	22%

Table 12 also presents a numerical summary of the visibility of disability services on UK universities' websites. The criteria for determining the level of visibility were described in the previous chapter. Most of the disability services websites were considered to be 'highly visible'. Specifically, 78% of the universities were either in the top six search results from

Google search or on the first page of the search on the provider's website. For a further 9% of UK universities disability services information on their websites were 'moderately visible'. This means they appeared on the first page of the Google search but not among the top six search results. Also, moderately visible websites included those that displayed disability services under student support links. For 12% of universities, the information about disability services was more difficult to find, meaning that the disability services did not appear on the first page of Google search or disability services were not immediately evident when searching the provider's website. Information about disability services may have appeared somewhere on the provider's website but was not immediately apparent as part of student support. These findings indicate that website visitors could usually easily access information about disability services and support due to high visibility.

Table 12 also presents the ease of navigating UK HE provider websites. According to the criteria around ease of navigation described in the previous chapter, around a third of the websites had 'excellent ease of navigation' and a further 50% had 'average ease of navigation'. Finally, table 12 shows the apparent disability services for autistic students in UK universities according to their websites. All previous results have shown that information about provisions seems easily accessible; often the provisions themselves seem to be common for all disabilities (78%) and not specific to autism.

Table 13: Numerical analysis of the autism provision on Saudi universities' and colleges' websites (2015/16)

The unit	Number
The number of Saudi HE providers (2015/16)	58
The total number of students with autism in the Saudi HE providers	No statistics
The total number of HE providers where no disability services were found	48 (83%)
The total number of HE providers where disability services were found	10 (17%)
The total number of HE providers' disability services that were found through Google search	5/10
The total number of HE providers' disability services that were found through the provider's website	5/10
The number of websites with highly visible disability services	5/10
The number of websites with moderately visible disability services	5/10
The number of websites with disability services low in terms of visibility	0/10
The number of websites with excellent navigation	9/10
The number of websites with an average navigation	1/10
The number of websites with low navigation	0/10
The number of HE providers' websites with generic disability services rather than autism-specific	8/10
The number of HE providers' websites with autism-specific services	2/10

Table 13 shows the search method results for disability services at Saudi universities for the academic year 2015/16. The findings show that, based on the online search, of the 58 Saudi HE providers, only 10 providers had centres/units that provide disability services. The rest of the websites (48) showed that the universities provided general student services. Half of the 10 disability services were located via Google search, and the other half were located via the providers' websites. According to the visibility criteria, five disability services were highly visible, and five were moderately visible. In terms of the ease of navigation, nine of the universities' websites had excellent ease of navigation, and one university website had average ease of navigation. Finally, the findings in table 13 show that 2 of the 10 universities' websites indicated that they had autism-specific provision alongside their generic disability services and the rest of the universities (eight universities) showed generic disability services only.

Overall, then, all 153 UK universities' websites indicated that they had disability services, whereas only 10 of the 58 Saudi universities indicated this. Information about disability service provisions in UK universities seemed easily accessible through the universities' websites. However, only 22% (13) of UK universities had clearly developed autism-specific

provisions according to their website information. For Saudi universities, where the websites indicated they provided disability services, the information about provisions was moderately-highly visible, and generally there seemed to be excellent ease of navigation. Autism-specific provision was evident at two (3%) Saudi universities only, according to their website information, but this is 20% of those universities which indicate that they have disability services. It was not clear whether the absence of information about disability services in most of the Saudi universities was due to their inclusive practices, lack of student services or that they do not show their disability services to the visitors of their websites.

To sum up, this stage one content analysis has examined the provision for autistic students, as presented on the UK and the Saudi universities' websites, in terms of its visibility, ease of navigation within the website and whether the provision was classified as autism-specific or generic disability support. The purpose of this stage was to explore the provisions apparently made for autistic students in the UK and SA and to see how these are presented in general before moving to more detailed analysis of a smaller number of websites. The following section presents the findings of the second stage of the research study.

4.2. Data presentation for stage two: What discourse seems to be communicated on the disability services websites of UK and Saudi universities (where autistic students are enrolled)? and what kind of services seem to be available for them?

The presentation of stage two data is divided into two sections based on the particular question and the type of analysis used (Written discourse analysis and thematic analysis). The written discourse analysis will be presented first in 4.3.1, then the thematic analysis in 4.3.2.

4.2.1. Data presentation for the written discourse analysis

This section will first provide definitions for each analytical unit and detail the meaning of each analytical question used to consider the apparent meaning of the texts. Many codes emerged through applying the analytical questions to the universities' texts and these codes are used to frame the presentation of data with evidence from the texts provided to illustrate

and support all claims based on the data. Appendices 14 and 15 are both examples of how the discourse analysis was coded.

4.2.1.1. Definitions of the analytical units

The discourse analysis conducted in stage two of this research was based on three analytical units (message, assumption and form) as developed in the piloting of the data analysis process for stage two which was detailed in the methodology chapter. The *message* refers to the meaning which seemed to be communicated in the text. Universities communicated different messages through their information for autistic students. For example, they communicated their understanding of autism and its impact on autistic students and their perspectives related to the inclusion of autistic students. *Assumptions* refer to the apparent preconceived notions that seemed to be communicated about services for autistic students. Finally, *form* refers to the text's use of language such as the tone the text seemed to take.

As stated above, analytical questions were used to determine the messages, assumptions, and forms from the texts. For messages, the main question was: What messages seem to be communicated in the text? Four questions emerged from this:

- **How is an understanding of autism communicated in the text?** This question addresses the ways universities communicate their understanding of autism; for example, whether they define autism (and if so, how?)
- **How do disability service providers seem to view autistic students?**
  This question addresses whether universities appear to consider autistic students as receivers of support and/or as partners in developing disability services. In addition, this question is concerned with how the universities view autistic students in regards to their abilities/disabilities and difficulties.
- **How is the inclusion of autistic students communicated in the text?** This question explores the university's provisions in relation to notions of inclusion and how it is communicated in the text.
- **How do disability service providers work with autistic students, and how is this communicated in the text?** This question is concerned with what the text states and suggests about how support is provided, for example: how universities seem to create an environment that fosters disclosure; how they encourage teamwork within and/or

beyond the university; the extent of disability services and when and how they are provided and whether providers seem to listen to students' experiences (and if so, how?).

The main analytical question for assumption was: what assumptions were made about autistic students and services for them? The sub-questions used to determine assumptions within the texts were as follows:

- **What assumptions are made about autistic students?** This question addresses the assumptions made about autistic students. Do universities assume that these students have support needs? (and if so, how?) Do they assume that they have issues in certain areas (e.g., issues related to socialising)? How are these assumptions demonstrated in the universities' texts?

- **What assumptions are made about services for autistic students?** This question considers apparent assumptions regarding services for autistic students, for example, Do universities assume that autism comes with an added cost to the individual (and if so, how?)

The following question was used to consider the form of the texts:

- **What form does the message take?** This question focusses on the text's use of language and the apparent tone of the message. Does the text use questions to communicate different messages (and if so, how?)? How does the text refer to autistic students? Does it use person-first language, identity-first language or both? Moreover, how this is expressed in the universities' texts? Does the text use quotes from autistic students or their parents? And, if so, how does it use such quotes?

4.2.1.2. Messages

As stated in the previous section, four questions were used to analyse the apparent messages of the university texts, and many codes emerged through this analysis, as described in the methodology chapter. These codes are used to frame the presentation of data below with illustrative evidence from the textual data of the Saudi and UK universities.

How is an understanding of autism communicated in the text?

Three codes emerged from applying this question to the textual data: first, *communicating an understanding of autism by giving a definition or description of autism*; second, *communicating an understanding of autism in terms of its impact on students*; and third, *communicating an understanding of autism in terms of the services autistic students are presumed to need*. These codes and portrayed understandings also seem to indicate that the universities can sometimes present themselves as 'expert' in autism because they claim to understand autism in various ways.

Code 1: Communicating an understanding of autism by giving a definition or description of autism

The two Saudi universities and three of the UK universities communicated their understanding of autism by defining or describing it, which they did in a number of different ways. The other 10 UK universities did not give an explicit definition or description of autism.

One university explicitly defined autism in the same way that the psychology community sometimes defines it: KAU defined autism as a *'cognitive disability'* (Dean of Student Affairs, 2013a). This university seemed to borrow the term *'cognitive disability'* from the cognitive psychology field, wherein investigating how autistic students experience and process the world around them, cognitive psychologists use cognitive theories such as the theory of mind, executive dysfunction and weak central coherence theory to understand autism (Charman *et al.*, 2011).

The University of Sussex (2016) seemed to define autism as a *'mental health condition'* as information about autistic students' support was placed under the heading *'mental health'*. In some ways, this may be considered outdated as the mental health category was used in the UK before 2004 to refer to autistic students during disclosure at the application stage (MacLeod and Green, 2009). However, according to the Mental Health Act (1983), which was reviewed in December 2018 (Gov.UK, 2018)*, autism* is defined as a *'mental disorder'*. This means that autistic individuals in the UK are sometimes treated as individuals with mental health problems and can be detained, even if they do not have a treatable mental illness. The review highlighted that the definition of autism should be kept under review by the UK government (Gov.UK, 2018). In addition, recent movements in the UK through a

number of charitable organisations stress that autism is *'not a mental health condition'* (NAS, 2018) and *'not a mental illness'* (Young minds, 2019).

By defining autism as a *'developmental disorder'*, KSU seemed to be influenced by definitions given by the psychiatric community at the time of publishing the university document about disability services. Autism was defined as a developmental disorder in international disease/disorder classification systems such as the, now superseded, DSM-IV (APA, 1994). In using the term *'spectrum disorder'*, the University of Worcester (2017) also seemed to be influenced by the psychiatric community and international classification systems, including, in this case, the most recent version of the DSM-V classification system where autism is defined as a *'spectrum disorder'* (American Psychological Association, 2012:31).

In contrast to the use of these more technical terms, for example, *'developmental disorder'* and *'spectrum disorder'* as in the previous paragraph, some universities showed their understanding of autism through the use of a descriptive adjective which seem to serve a more rhetorical purpose, such as *'hidden disability'* (Bath Spa University, 2017) and *'lifelong* disability' (University of Worcester, 2017) . The descriptive adjectives *'hidden'* and *'lifelong'* are, perhaps, indicators of the use of empathetic tone, which will be discussed later in the analytical unit 'form'.

Code 2: Communicating an understanding of autism in terms of its impact on students
5 of the 13 UK universities communicated an understanding of autism through considering its impact on autistic students; none of the Saudi universities communicated in this way. The five UK universities communicated that autism might have an impact on the students in relation to transitions or changes and/or that autism may have different kinds of academic, social and emotional impact.

Specifically, some universities communicated that autism might make the transition to HE and other forms of change difficult. For example, York St John University stated that they *'recognise that the transition from living at home to university can be stressful'*, especially for students on the autism spectrum (York St John University, 2017). Both Bath Spa University and Newman University emphasised that accepting changes in routines or the environment might be challenging for some autistic students; for example, Bath Spa

University indicated that *'adjusting to new routines and environments can be challenging'* (Bath Spa University, 2017), and Newman University indicated that *'some students have particular difficulties adjusting to change, especially when it occurs without notice'* (Newman University, 2017).

Different types of impact were also evident: emotional, social and academic. For example, the University of Surrey indicated an emotional impact of autism, saying that autistic students *'can encounter difficulty understanding or talking about their feelings and needs'* (University of Surrey, 2017). Bath Spa University indicated that the main areas of difficulty for students with Asperger syndrome are social: *'social communication, social interaction and social imagination'*. They also indicated that *'meeting new people'* can be challenging for autistic students (Bath Spa University, 2017). The University of Surrey pointed out that people with this condition *'may have difficulty with social interaction and making new friends'* (University of Surrey, 2017), and Newman University indicated that *'some students may have difficulties with social situations'* (Newman University, 2017). In terms of the academic impact of autism on autistic students, Newman University indicated that some autistic students might have difficulties *'staying focused in lectures or on their studies'* (Newman University, 2017).

Further analysis within this code suggests that universities may position themselves as 'experts' in autism because they claim to understand the impact of autism on autistic students. For example, Glasgow Caledonian University stated that they *'recognise the additional challenges and anxieties that may be experienced by applicants on the autism spectrum'* (Glasgow Caledonian University, 2017).

Code 3: Communicating an understanding of autism in terms of the services autistic students are presumed to need
Describing the services and support that autistic students might need in the university setting was one way that the universities used their texts to show their understanding of autism. In other words, the universities' texts seemed to claim that autism is a condition/disorder that leads to the autistic student requiring services and support. For example, some universities indicated that the first point of contact for autistic students was the disability services office. However, they varied in terms of the use of tone, with some using a soft tone to encourage the students to initiate a contact, some using a neutral tone to indicate how autism leads to the

need for disability services and others adopting a stronger tone, such as the use of the imperative, to link autism with the need for disability services and support. This use of tone will be discussed later in the analytical unit 'form'.

Newman University suggested that autism might mean autistic students need support: *'You may find the following support helpful'* (Newman University, 2017). It did not claim that it would definitely be able to help or that the support was definitely needed by students affected by autism. By contrast, 2 of the 15 universities claimed that disability services and support could make the life of students affected by the condition better. For example, the University of Worcester (2017) stated that *'With the right support and encouragement, people with Asperger syndrome can lead full and independent lives'* and that this was their aim in providing disability services for autistic students. In addition, KAU—in the females' section—made a similar claim, stating that they *'Provide a variety of related services and counselling that enable the female students with special needs to continue their education and effectively participate in employment'* (Dean of Student Affairs, 2013a).

In a statement made by UCL (2017), including the university's Institute of Education, it seemed that the students' autism determined the kind of support that might be offered by both institutions: *'Depending on your needs, these services could include…'* (UCL, 2017), which might be interpreted as suggesting that the severity of the students' autism could determine the level of disability services and support. This statement, which was found only in these institutions, is a way of showing a link between the students' experience of their condition and the kind of disability services and support that might be offered. The rest of the universities listed the disability services and support that they thought autistic students needed.

The data showed that all 15 universities suggested that autism led to students requiring different kinds of disability services and support. Each university offered a different range and variety of disability services. This will be discussed later in this chapter in the thematic analysis section.

It can be concluded that the Saudi and UK universities appeared to communicate their understanding of autism in three different ways: first, by focusing on autism as a condition, second by focusing on the students and the possible impact of autism on them; and, third,

showing their understanding of autism through presenting the services autistic students are presumed to need.

How do disability service providers seem to view autistic students?

This section relates to the second analytical question regarding the communication messages in the texts: 'how do disability service providers seem to view autistic students?' Three codes emerged from the texts in response to this question. The first code was *considering autistic students as receivers of support*, where universities seem to regard autistic students as having a passive role in relation to disability services. The second code was *considering autistic students as partners in developing disability services*. The universities that view autistic students as partners seem to consider the role of these students as an active role and seem to provide opportunities for autistic students to have some control over the support provided to them. Some universities seem to consider autistic students as both receivers of services and partners in developing disability services. However, these universities are atypical and seem to send contradictory messages. This will be illustrated below. Finally, a third code emerged from the texts in response to this question: *viewing autistic students in terms of their abilities/disabilities and difficulties*.

Code 1: Considering autistic students as receivers of support

In everyday use, people tend to define a 'receiver' of something as 'a person who gets or accepts something that has been sent or given to them' (Oxford University Press, 2019). Most UK universities' and both Saudi universities' texts seemed to communicate that they 'gave' the disability services and that the students received these services. These texts did not indicate that the students had a say in what was provided to them nor that the universities' disability services carried out any collaborative work with the students.

The University of Derby (2017), the University of Kent (2014d) and the University of Leicester (2017) listed ways that students can be supported, including, for example, stating that they have an *'experienced specialist Study Advisor for students with AS/ASD who can support students and their families during the transition from school to university'* (University of Leicester, 2017). This statement appears to indicate that a Study Advisor is available 'for' the autistic students, which suggests that the universities positioned autistic students as receivers and in need for their support, therefore, placing themselves as 'providers' and the autistic students as 'receivers'. In addition, among UK universities, the

University of Worcester, as noted earlier, indicated that *'with the right support and encouragement, people with Asperger syndrome can lead full and independent lives'* (University of Worcester, 2017). This suggests that the university viewed autistic students as both needing support and being receivers of support. Similarly, the University of Sussex guided autistic students in the necessary steps for accessing support under the heading *'How to access our service?'* (University of Sussex, 2016), again perhaps seeming to assume that the students needed guidance in order to receive support.

Both Saudi universities seemed to consider autistic students as receivers of support. First, KSU stated that it *'offer[s] full services to these students'* (KSU, 2013: 33). Second, KAU indicated that it provided *'academic advice to the male student when needed'* (Dean of Student Affairs, 2013a). According to these statements, the services were provided 'to' the autistic students, suggesting that the universities positioned autistic students as receivers.

Code 2: Considering autistic students as partners in the process of providing disability services or in developing these services
Only one UK university's text out of 13 UK universities seemed to entirely consider autistic students as partners in the process of providing disability services and support: Bath Spa University. This university stated that it assigns a disability advisor who discusses the individual needs of the autistic student with him or her: *'The dedicated Disability Advisor is available to discuss your requirements before your arrival and throughout your university life'*. This suggests that the student is a partner in the support process because the disability provider discusses the individual requirements 'with' the student.

Some universities' texts indicate that they develop services in partnership with autistic students while simultaneously viewing them as receivers of support. These include UCL, UCL (IOE) and University of Surrey. UCL and UCL (IOE) indicated that *'advice and support are available to students who have autistic spectrum conditions'*, and they developed a student planner with a former UCL student with ASD in collaboration with one of their mentors (UCL, 2017). In terms of the University of Surrey (2017), the disability services providers encourage autistic students to get in touch for support: *'If you have Asperger syndrome/autism, then we would encourage you to contact the ALS department now'*. This seems to be a way of showing that they consider autistic students as receivers of support because they motivate them to access the university's disability services. They seem to

position themselves as professionals who know how to help autistic students and motivate them to do certain things. At the same time, the university also seems to consider autistic students as partners that they collaborate with *'so that we can discuss with you'*.

These statements indicate that these universities seem to play the role of 'experts' in providing 'advice and support'. They take the role of experts in autism support instead of placing the autistic students in this position. However, these universities remain 'flexible' in delivering these services to autistic students, for example by working with a former student to develop a student planner and by providing advice and support at the same time to autistic students.

Code 3: Viewing autistic students in terms of their abilities/disabilities and difficulties
This code is concerned with how universities view autistic students in terms of their abilities and disabilities or difficulties. The text of one Saudi university acknowledged students' abilities and focused on their achievements stating that the university helps autistic students and enables them to *'demonstrate their achievements within the scope of their abilities'* (KSU, 2013:55). On the other hand, four UK universities seemed to view autistic students in terms of the difficulties they might have. Newman University, Bath Spa University, University of Surrey and Nottingham Trent University mentioned the social difficulties associated with autism. In addition, as mentioned earlier in this chapter, Newman University and Bath Spa University talked about students' difficulties regarding their adjustment to changes in the environment and routines. Newman University and Nottingham Trent University also mentioned possible academic difficulties: *'some students may have difficulties with…staying focused in lectures or on their studies'* (Newman University, 2017) and *'issues relevant to the individual…might include managing workloads and meeting deadlines'* (Nottingham Trent University, 2017). Nottingham Trent University (2017) also stated that *'independent living'* and *'considering future career aspirations'* are both areas of difficulty among some autistic students. The University of Surrey (2017) talked about students' difficulties in the area of *'understanding or talking about…feelings and needs'*.

The text of one UK university acknowledged both the abilities and disabilities of autistic students. According to the University of Worcester (2017), autism is a *'spectrum disorder'* *'because the condition affects people in many different ways and to varying degrees'*. This suggests that they note that some students with autism may have more significant disabilities

than others. In addition, the University of Worcester (2017) indicated that autistic students tend to have difficulties in three main areas: social interaction, social communication and imagination. The University of Worcester (2017) also seemed to acknowledge autistic students' abilities, especially those at one end of the autism spectrum, students with 'Asperger Syndrome'. The University of Worcester (2017) text stated that students with Asperger syndrome have *'average or above average intelligence',* fewer issues with *'speaking'* and do not have the learning disabilities which are usually associated with autism. The other Saudi and the rest of the UK universities did not mention anything related to autistic students' abilities or specific difficulties.

In conclusion, it appears that the disability service providers view autistic students in three different ways, as students who have a passive role in the process of support, as students who are partners in the support process, or as students who are both receivers and partners in the support process. Finally, the findings showed that some universities viewed autistic students in terms of acknowledging their abilities, disabilities and difficulties. For example, by putting an emphasis on the autistic student's achievements or an emphasis on the difficulties associated with the autism condition/disorder.

How is the inclusion of autistic students communicated in the text?
This section investigates how the studied universities communicated the inclusion of autistic students in their texts. Two codes emerged, as follows: (1) *communicating perspectives on inclusion* and (2) *communicating educational placement and provision.*

Code 1: Communicating perspectives on inclusion
In terms of communicating perspectives on inclusion, one message emerged—the recognition of equality. The Equality Act (2010) underpins disability services for disabled students, including autistic students, in England, Scotland and Wales (Hepple, 2010). However, the act was not mentioned in the universities' texts about support provided for autistic students by the university; only 1 university out of the 13 (and none of the Saudi universities) emphasised the importance of equality in its texts. Since Saudi universities are not under such a law, it was expected that no statements in recognition of equality would be found in these texts. Glasgow Caledonian University was the single UK university that mentioned the importance of equality. Specifically, its text mentioned that autistic students have similar concerns as other students without disabilities, such as those about transition and university life. This

statement seemed to be an attempt to reassure prospective students that the university understood autism and that students with autism would be treated equally with other students without disabilities. Furthermore, the statement seemed to indicate an intention to position autistic students as part of the wider cohort, rather than always focussing on what makes them distinctive from other students.

Code 2: Communicating educational placement and provision

The second code centred around two different messages regarding inclusion (i.e., educational placement of autistic students and educational provision). First, regarding educational placement, the universities' texts indicated that students with autism would attend the same classes as their peers (full inclusion) with additional support from the disability service centres/offices. Evidence of this viewpoint was available in all 15 Saudi and UK university texts. For example, Nottingham Trent University (2017) stated that *'the Disability Officer will act as a first point of contact for you, and can coordinate any additional support that you may need'*. In other words, students with autism will receive their learning as other students do. However, they may need additional support from the disability services office. Another example, from the University of Derby (2017), told students that, *'if you are identified with autism or Asperger syndrome then support is available to you while you are studying at the University of Derby from the Student Wellbeing Service'.* For the Saudi universities, the emphasis was on encouraging full access to all of the universities' services, academic and social activities, curriculum, sites inside the university campus and social activities outside the university (KSU, 2013; Dean of Student Affairs, 2013a). Mentioning full inclusion showed the value of inclusive practices in these HE settings. For instance, York St John University (2017) focussed on social inclusion: *'You will be able to take part in loads of interesting and fun activities which will introduce you to university life and study'.*

For the second message, educational provision, the findings showed seven different kinds of autism-specific provision: academic provision (e.g., KSU, 2013), medical care (e.g., Dean of Student Affairs, 2013a), special housing services (e.g., Bath Spa University, 2017), employability support (e.g., UCL, 2017), specific financial aid (e.g., Newman University, 2017), transition services (e.g., University of Worcester, 2017) and psychological and social services (University of Kent, 2014a). Additionally, some universities adopted a person-centred approach, in which the universities' texts stated that services are provided in response to students' unique needs. This approach positioned the universities as 'flexible' providers of

disability services, showing they consider others' perspectives and suggesting that they respond in different ways for different students. As seen in the literature review chapter, person-centred practice indicates a focus on the individual's abilities and strengths, which considers the student's desires and talents and uses these when setting educational goals (Hurewitz and Berger, 2008). For example, UCL and UCL (IOE) both indicated that their services were person-centred: *'Depending on your needs, these services could include…'* (UCL, 2017). They considered the individual needs of autistic students as the start of the support process, adapting the support/services to the individual students' needs. The Bath Spa University (2017) and York St John University (2017) texts included similar statements; therefore, 4 UK universities out of 13 explicitly mentioned person-centred practices in their texts. Regarding the two Saudi universities, KSU stated that *'academic advising aims to facilitate the student's academic progress according to course requirements, as well as the student's desires and abilities'* (KSU, 2013:55), referring to individual student's 'desires and abilities' as well as 'course requirements'.

In conclusion, the texts of the universities communicated inclusion in two different ways: (1) as flexible providers focussing on the students' personal requirements and needs (person-centred approach) and (2) expert providers claiming an understanding and recognition of educational needs and a recognition of equality.

How do disability service providers work with autistic students, and how is this communicated in the text?

Six codes emerged from this question: the first code concerns providing training for staff and peers, the second code *communicating that no two students are alike*, which suggests that each student is regarded as unique in terms of his or her abilities/disabilities and difficulties. The third code is *fostering disclosure*; the fourth code is about *communicating teamwork within the university and with outside organisations,* the fifth code is *providing broad or limited disability services*, the sixth code is *listening to students' voices*. Each code will be presented below with evidence from the original texts.

Code 1: Providing training for staff and peers

In terms of providing training, one Saudi university and four UK universities mentioned that they provide training for faculty/staff, peers, mentors and the university community about the needs of the autistic student and autism as a disorder to enable them to work effectively with

these students. The rest of the universities did not mention this aspect. It is not information that students necessarily need to know, and it is interesting to find that some universities choose to share such information. Not sharing this information does not mean it is absent in practice, but sharing this information might indicate an intention to show and celebrate a commitment to developing services.

One Saudi university (KSU) indicated that they have four different kinds of training. First, providing training to academic staff about the needs of autistic students and about the nature of autism; second, providing training for faculty members and other staff about *'the services provided by the special needs centre'* (KSU, 2013:54); third, providing training for faculty members about practical strategies *'to aid in adopting teaching practices to meet the needs of students with autism';* fourth, training the university community in how they can develop skills to support autistic students. These levels of training seem to aim at better supporting autistic students who are enrolled in this Saudi university. In terms of UK universities, according to the texts, it seems that they have a different focus on training. Three UK universities appear to provide training in autism and how to support autistic students academically and this kind of training appeared to be targeted towards peer mentors only. For example: *'There are a number of Peer Mentors who are specifically trained to support students with Asperger syndrome'* (Bath Spa University, 2017) and *'They employ a team of second-year, final-year and postgraduate Student Mentors who have been trained to help students with academic writing and maths'* (Nottingham Trent University, 2017). One UK university did not specify the targeted audience in regards to autism training; they stated that they *'Provide training to those who will be working with…'* autistic students (University of Leicester, 2017). According to these findings, it can be concluded that the provision and content of autism training and the targeted audience varied from university to university.

Code 2: Communicating that no two students are alike
The texts from 3 out of 13 UK universities communicated that, when working with autistic students, no two students are alike. For example, Bath Spa University (2017) pointed out that *'Asperger syndrome…affects people in different ways and to varying degrees',* Newman University (2017) indicated that *'the needs of students with autistic spectrum disorders will vary with each individual',* and the University of Worcester (2017) emphasised that *'Autism is often described as a 'spectrum disorder' because the condition affects people in many*

different ways and to varying degrees'. These three quotes from the texts attest that these universities seem to have incorporated the acknowledgement that *'no two students are alike'* into their practices, which may indicate that they may have a 'flexible' approach to the provision of autism services.

Code 3: Fostering the disclosure of autism

3 of the 13 UK universities specifically discussed how disclosure of autism benefits autistic students in terms of accessing support. The remaining UK universities and the two Saudi universities did not mention disclosure or the need for, or importance of, disclosure in accessing support at university. The universities that communicated the importance of disclosing autism emphasised that a reported autism diagnosis allows students to access some of their primary disability services, and in some cases was required. They also indicated that disclosure could often be instrumental in resolving minor problems before they become significant issues.

First, York St John University stated that their weekly social group, Stratus, is *'for any student at York St John University who has been diagnosed as being on the autistic spectrum (including Asperger's)'* (York St John, 2017). This statement emphasises the importance of the autism 'label' in accessing this form of social support at the university. This also indicates that the university may encourage autistic students to disclose their disability by promoting their social support group bringing students with an autism diagnosis together. Furthermore, this university stated that, if a student has identified him or herself as on the autism spectrum on their UCAS form, the university will send them information about their *'Early Start Programme and the alternative Freshers' Week'* (York St John, 2017). This also functions as a means, perhaps, of encouraging autistic students to disclose their disability.

Second, Glasgow Caledonian University stated that they had created a Summer Transition Programme and encouraged autistic students to disclose their autism diagnosis in order to access this service: *'An invitation to the Summer Transition Programme is extended to all applicants who have disclosed a diagnosis (or who have identified with a diagnosis) on the autism spectrum'* (Glasgow Caledonian University, 2017). In addition, they made their Student Mentor programme available only to students who disclosed their disability (Glasgow Caledonian University, 2017): *'... the Socialeyes programme is only provided to students who disclose their autism'* (Glasgow Caledonian University, 2017).

Finally, the University of Leicester (2017) seemed to indirectly foster the disclosure of autism when they stated that *'many students with Asperger syndrome/autism spectrum condition (AS/autism spectrum) use the AccessAbility Centre on a regular basis'*. By indicating that current autistic students access support regularly, prospective students are encouraged to do the same. They also show that disclosure can often help to resolve minor problems before they become significant issues: *'We advise students to let us know if they have AS/ASD so that support can be made available and so that everybody – the student, AccessAbility staff, the student's Personal Tutor, the AccessAbility Tutor for the department and their parents/carers can keep in touch with each other and solve minor problems before they become major issues'* (University of Leicester, 2017).

Reassuring the autistic students that their personal information will not be shared with others without their permission is another way in which disclosure of a disability is encouraged for autistic students. Interestingly, the importance of confidentiality was not a commonly communicated message in the universities' texts. Only two UK universities indicated that their support is confidential and that nothing is shared with others without permission. The University of Sussex (2016) pointed out that *'the Mental Health Advisors will only share information with the student's written consent'*. Similarly, the University of Leicester (2017) stated that they *'want to reassure prospective students that any information about students is kept confidential and other people are only told if the student gives their permission'*. Furthermore, the University of Sussex (2016) emphasised that, when a student accesses disability services, they are accessing a confidential service. The confidentiality of disability services is reassuring for autistic students and may encourage them to disclose their autism diagnoses.

Code 4: Communicating teamwork within the university and with outside organisations
Collaborative working is one way that seems to indicate that universities are 'flexible' providers of disability services because they are open to others' different perspectives. In terms of communicating a teamwork approach within a university, a key indicator was the use of the pronoun 'we'. 'We' denoted teamwork: between disability service providers and autistic students; between staff/faculty and disability service providers; between the disability services team and other services within the university, such as housing and accommodation services; between members of the disability services team; and/or between disability service

providers and the peers of autistic students. These collaborations are the main points of this section, and evidence for them from the universities' texts will be cited.

Collaboration between disability service providers and autistic students was evident in 5 of the 15 UK universities (York St John University, University of Leicester, Nottingham Trent University, UCL and UCL (IOE)). For example, as previously noted, York St John University (2017) established a weekly social group called Stratus. It is stated that the establishment of this social group in 2013 ensued from a discussion between the disability services team and autistic students at the university (York St John University, 2017). In addition, the disability services team proudly reports that the Stratus Writers project has been recognised with an award. They used the pronoun 'we' to refer to themselves and the autistic students who were involved in the project: *'The conference organisers were so impressed that we even won an award!'*(York St John University, 2017). The University of Leicester (2017) also collaborated with autistic students in creating a film that introduces the AccessAbility centre and its services to new students and prospective students on the autism spectrum. Nottingham Trent University indicated that it strongly values feedback from current students: *'At the end of every academic year there is a survey sent to students receiving support. We review your responses and make recommendations accordingly. You can, of course, let us know your thoughts at any stage by either contacting your disability officer or through the Student Support Services (Disability Services) Manager'* (Nottingham Trent University, 2017). This indicates that Nottingham Trent University (2017) appears to take the perspectives of autistic students into consideration. As previously mentioned, UCL and UCL (IOE), reported that a former UCL student with ASD had designed a student planner in collaboration with one of their mentors.

Regarding collaboration between staff and faculty and disability service providers, it was found that 3 of the 13 providers of disability services in the UK and Saudi universities' texts demonstrated this kind of collaboration: Bath Spa University, the University of Sussex and KSU. Bath Spa University and the University of Sussex indicated that they liaise with lecturers/tutors regarding the student's learning plan and his or her support recommendations (Bath Spa University, 2017; University of Sussex, 2016). At KSU, it seems that the disability services team adopts a different approach to collaboration with faculty: *'the special needs centre provides small workshops and regular meetings to educate faculty about autism, to explain the services provided by the centre and to provide necessary strategies for modifying*

teaching practices' (KSU, 2013:50). Furthermore, *'the special needs centre cooperates and liaises with…faculty to provide the services autistic students need'* (KSU, 2013:51). Collaboration between the disability services team and other services within the university, such as housing and accommodation services, was also evident in one of the UK universities' texts: the University of Sussex stated that they *'liaise with Residential Services over accommodation issues'* (University of Sussex, 2016). Of the Saudi universities studied, one stated that they collaborate with other departments within the university: *' the special needs centre cooperates and liaises with the departments in which students need the services'* (KSU, 2013:52).

A team relationship between members of the disability services team was emphasised more than any other kind of teamwork, being mentioned by most of the UK universities. For example, texts from UCL and UCL (IOE), stated that *'prospective students are welcome to contact us'*; in this statement, the disability services portrayed themselves as a team using the pronoun *'us'* (UCL, 2017). The University of Surrey (2017) also portrayed themselves as a team with regard to the provision of disability services to autistic students *'so that we can discuss with you'* and *'we would encourage you to contact the ALS department now'*. In addition, the disability services team at Nottingham Trent University (2017) indicated that: *'Together, we work to improve the university experience for students with Autism Spectrum Conditions (ASC)'* (Nottingham Trent University, 2017).

In terms of collaboration between disability service providers and autistic students' peers, one UK university (Glasgow Caledonian University) mentioned collaborative work between disability service members and student mentor peers: *'Student Mentors keep a record of work completed in each session, which may be shared with the Disability Advisor and used for planning and monitoring progress'* (Glasgow Caledonian University, 2017).

In terms of communicating about teamwork with external organisations, this includes cooperation between the disability services team and external specialists in autism. 2 of the 13 UK universities claimed to cooperate with an external source of support. These external supports included GPs, counsellors, health care teams and the National Autistic Society. The University of Sussex (2017) stated that in some situations, they liaise with a *'GP, Counsellor, or Health Care Team'* to offer support to autistic students. In addition, Glasgow Caledonian University (2017) indicated that *'the Disability Team, in partnership with the National*

Autistic Society (Scotland)' deliver their summer transition programme. They also mentioned that they had developed a programme in collaboration with the National Autistic Society called Socialeyes, which *'facilitate[s] social skills and social understanding for people on the autism spectrum'.*

The previous sections presented universities that clearly communicated the nature of the collaboration they undertake with internal and external institutions; however, some parts of KSU's text were unclear as to whether the disability services team collaborates with internal or external sources of support. For example, it stated that *'the special needs centre cooperates with a team that specializes in teaching students with autism in order to prepare materials on what autism is, what services are provided by the centre and how to implement necessary strategies to modify the curriculum'* (KSU, 2013:55). It is not clear from this statement whether the specialised team is an external or internal source of support with which the disability services team collaborates. In addition, KSU (2013:55) stated that *'the academic advisor cooperates with an autism specialist and the student's college mentor to help the student choose programmes or courses'.* It is also unclear whether the autism specialist is an internal or external source of support. However, collaborative work seems to offer evidence of some flexibility in supporting autistic students since it suggests consideration of multiple perspectives to develop autism services.

Code 5: Providing broad or limited disability services
In terms of how the texts present their disability services, it was found that some UK universities communicated the breadth of their range of disability services. The breadth of disability services has three meanings in this context: first, it means that the disability services begin before admission to the university; second, that disability services are broad in terms of the range of services offered; and third, that disability services are available for both diagnosed and undiagnosed students. For example, Bath Spa University (2017) claimed that *'the dedicated Disability Advisor is available to discuss…individual requirements before… arrival and throughout… university life'.* This clearly exemplifies the first indicator of breadth (i.e., disability services start before admission to the university). The University of Leicester (2017) indicated that students with specific learning difficulties, such as dyslexia or dyspraxia, can access support for these conditions too (University of Leicester, 2017), indicating that a broad range of disability services is available. The communication that disability services are available for both diagnosed and undiagnosed students also signals the

breadth of disability services for autistic students. Three UK universities' texts stated that services could be provided to both students with an autism diagnosis and undiagnosed students. The universities either made their services available for both diagnosed and undiagnosed students or offered them support in obtaining a formal autism diagnosis.

Glasgow Caledonian University mentioned the importance of an autism diagnosis in accessing three different services (transition services, mentoring and social services). These services are available for students with and without a formal diagnosis of autism: *'the Disability Team runs a Socialeyes programme for GCU students who have a diagnosis, or who would identify with a diagnosis, on the autism spectrum'* (Glasgow Caledonian University, 2017). Also, at Bath Spa University, the providers of disability services stated that if students *'do not have a formal diagnosis',* they must *'contact a Disability Advisor within Student Support'* as *'the Disability Advisors are able to offer advice and guidance on the procedure for a formal assessment and how to go about this'*. York St John University indicated that their weekly social group Stratus *'is for any student at York St John University who has been diagnosed as being on the autistic spectrum (including Asperger's)'*. However, they *'also welcome students that might not have a formal diagnosis but who identify with the same social and communication differences'*. York St John University also makes their early start programme available for both diagnosed and undiagnosed students who have social and communication difficulties: *'You may have identified yourself as on the autism spectrum or Asperger's or simply as finding social interactions and communicating with others difficult. The aim of the early start programme is to help you adjust to university life'*. These universities seem flexible in their supportive approach and can be considered 'flexible' providers, since they acknowledge that an autism diagnosis is not always easy and/or available, as it is a complicated procedure, particularly in adulthood. Also, disclosing a disability may not be a desired action by the autistic students.

In terms of limiting the disability services available, one Saudi university (KSU) communicated that their services are not accessible to undiagnosed students, indicating that an autism diagnosis is a gateway to their services: *'The case of having a diagnosis of the autism condition from an authorized body grants the student eligibility to services'* (KSU, 2013:33). This may mean that other students with social and communication difficulties, or those who remain undiagnosed, are denied support. This may be the case in other universities but was not explicitly stated.

Code 6: Listening to students' voices

The practice of listening to students' voices appears to be absent from Saudi universities, based on the findings of this research, at least as portrayed in their disability services website texts. However, students' voices do appear to be sought and heard in some of the UK universities. To listen to students' voices would seem to be to try and understand how autistic students perceive the services on offer. Students' voices appear to be of importance in some UK universities before support services have been established and made available, and when universities wish to introduce the disability services to prospective students. In addition, some UK universities directly state that they wish to receive feedback and/or questions from students and that they are willing to adapt their services accordingly.

In some UK universities, autistic students' perceptions and shared views of the services provided were evident. For example, Bath Spa University includes a student quote to portray this: *'The fact that I've been able to have a support worker has been an enormous help to me, keeping me on track with my work, as well as being a friendly face who I know will help me to relax'* (Bath Spa University, 2017). Some UK universities also indicated that they considered student feedback before establishing and providing support. For example, York St John University's (2017) 'Stratus' social group mentioned previously was *'established … after we had discussions with students on the autistic spectrum about their experiences at the university'*. The University of Leicester (2017) included students' voices in the introduction of its disability services to prospective students: *'Students with Asperger's Syndrome introduce the University of Leicester's AccessAbility Centre, and tell us how the Centre can help'*.

Another means of acknowledging students' voices were to directly state the desire to receive feedback and/or questions from students; for example, York St John University (2017) encouraged students to give feedback: *'Please feel free to get in touch if you have any questions. We look forward to hearing from you!'* They also pointed out that *'if there is something more than we could do – let us know!'* And *'if you have any questions or would like any more information, please contact us'*. As previously noted, York St John University (2017) also described the feedback they receive as *'really positive'*. Similarly, the University of Sussex (2016) made two statements indicating that the university welcomes student feedback: *'If there is anything specific that you are concerned about, please let us know when*

you return your medical evidence and registration form' and *'you can phone or drop in to reception to make an appointment with your Mental Health Advisor to discuss further adjustments'*. That feedback from autistic students was welcome was also evident at Glasgow Caledonian University (2017), which indicated that *'throughout the programme, there are opportunities to raise additional questions or concerns'*. Glasgow Caledonian University (2017) also told the students how they could ensure their voices were heard by the people in charge: *'We can arrange a time for you to come in to speak to one of the Advisors about the programme and answer any questions you might have'*. Nottingham Trent University (2017) encouraged students to get in contact and give feedback to the providers of disability services: *'Let us know how we're doing'*. Nottingham Trent University (2017) indicated that students' feedback could change and create services provided for autistic students: *'We actively canvas student opinion and adapt our support provision to accommodate your feedback where possible'*. For example, *'at the end of every academic year, there is a survey sent to students receiving support. We review your responses and make recommendations accordingly'* (Nottingham Trent University, 2017). Students with autism could also share their thoughts at any stage with disability service providers, and the disability service providers seemed to value feedback from students with autism: *'We value your feedback as it helps us to shape both your future and the future of the University as a whole'* (Nottingham Trent University, 2017).

Similarly, York St John University (2017) showed how student feedback could influence the nature of the available services. They provided an example related to social services: *'One of the students' main concerns related to socialising at university. Students said that they wanted to make friends with other people that 'understand' what it's like to be an autistic student. As a result, staff and students set up Stratus as a social group for students on the spectrum to make friends and do a range of activities together during term time'*. Student voices at this university also helped the disability services providers to improve practices in HE settings. They stated, *'The Stratus Writers Project provides a means for students to share their valuable 'insider' perspectives and accounts intending to effect change in higher education'* (York St John University, 2017).

In conclusion, listening to students' voices seems to indicate that providers of disability services adopt a flexible approach to service provision in that they hear students' concerns and adapt their services accordingly.

To sum up, this section showed how the texts present their work with autistic students. It was found that universities seem to have different practices when working with autistic students which can be characterised as inclusive practices (e.g. listening to the autistic students' voices) or exclusive practices (e.g. limiting disability services to diagnosed students only). The next section examines the second analytical unit, assumption.

In summary, this section used the analytical unit message and its main analytical question: what message seems to be communicated in the text? Both the analytical unit and the main question helped uncover the messages underpinning the text. For example, they provided insight into how the understanding of autism was communicated and how the providers of disability services viewed students.

4.2.1.3. Assumptions

As discussed at the beginning of this chapter, the analytical unit of assumption included two questions used to analyse the university texts: What assumptions are made about autistic students? What assumptions are made about services for autistic students? The codes emerged from these questions are: *assuming that autistic students have support needs*, and *assuming that autistic students have 'issues' in certain areas*. Also, assuming that autism comes with an added cost to the individual. This section focusses on these codes and includes evidence derived from the texts.

What assumptions are made about autistic students?
This section presents the findings regarding apparent assumptions made about autistic students in the universities' texts. Specifically, it shows that assumptions were made about these students regarding their need for support and that they have issues in certain areas.

Code 1: Assuming that autistic students have support needs
All the universities (15 universities' texts) indicated that autistic students have support needs. In addition, the universities seem to play the role of 'expert' providers with the tone of the texts apparently being that of someone who understands the support needs of autistic students (findings around tone will be presented in section 4.2.1.4. Form). The universities' understanding of the support needs of autistic students were many and can be grouped as

follows, assuming that autistic students have: transition needs, academic needs, social needs, emotional needs, financial support needs, housing needs, employment needs, medical care needs, needs related to self-reliance and unspecified support needs, such as one-to-one support or advisory services that aim to meet unspecified individual requirements. It is important to note that the emphasis on these needs varied and some were mentioned more frequently than others. The details of these support needs will be presented in the second section of the stage two findings (in the thematic analysis section).

Code 2: Assuming that autistic students have 'issues' in certain areas
8 universities out of 15 seemed to consider autistic students as students who have issues, or difficulties, in certain areas. The evidence for this assumption overlaps with the previous code of *viewing autistic students in terms of their abilities/disabilities* (which was a response to the second analytical question related to message: How do disability service providers seem to view autistic students?) Therefore, the detailed evidence and examples will not be repeated here. The universities variously assume that autistic students struggle with social communication, social interaction, social imagination, adjusting to new routines and environments and academic issues, such as staying focussed in lectures. In addition, some assume that these students have difficulty understanding or talking about their feelings and needs and have difficulty processing information, developing independent living skills and considering future career aspirations. This code demonstrates that universities often seem to communicate that they understand issues associated with autism. As such, they seem to position themselves as experts in understanding the difficulties that autistic students may face in HE settings.

What assumptions are made about services for autistic students?
Only one code emerged from this analytical question, which is *assuming that autism comes with an added cost to the individual*.

Code 1: Assuming that autism comes with an added cost to the individual
Only UK universities made this assumption. Most UK universities (10 out of 13) mentioned Disabled Students' Allowance (DSA) which is a grant from public funds provided for disabled students who attend a HE course. Specifically, the texts provided an explanation of the DSA (Bath Spa University, 2017; UCL, 2017) and disability service providers talked about providing assistance in making applications for the DSA (University of Sussex, 2016;

University of Leicester, 2017; University of Surrey, 2017; University of Worcester, 2017) and also indicated that some services are costly and that they expect the student to obtain this grant before they access these services (University of Sussex, 2016; Nottingham Trent University, 2017; UCL, 2017; University of Leicester, 2017).

Assumptions within the universities' texts indicated that the universities positioned themselves as experts in understanding autistic students' support needs. Furthermore, they showed expertise about the issues that these students might face in certain areas (e.g., social communication). In addition, the universities showed their expertise in understanding that autism comes with an added cost to the individual. The analytical unit assumption tended to be linked to the expert providers of disability services rather than the flexible providers. The next section examines the codes that emerged from the analytical unit of form.

4.2.1.4. Form

One question was used to address the analytical unit of form: what form does the message take? This question focusses on the text's use of language. 13 codes emerged from this analytical question, indicating the wide variety of language used in these texts. These 13 codes could be grouped into five different sections to present the data to the reader: quote, tone, question, student reference and provision reference (see Table 14). The 13 codes will be presented, and evidence will be given from the universities' texts.

Table 14: The codes that emerged from the text by asking the question: What form does the message take?

Form	Code
Quote	*Code 1: Using quotes from students and parents*
Tone	*Code 2: Using an advertising tone*
	Code 3: Using an encouraging tone
	Code 4: Using a welcoming tone
	Code 5: Using an advisory tone
	Code 6: Using an empathetic tone
	Code 7: Using an uncertain tone
	Code 8: Using an imperative tone
	Code 9: Using a promising tone
	Code 10: Using a segregating tone
Question	*Code 11: Using questions that show empathy, knowledge about autism and questions to frame information*
Student reference	*Code 12: Form of the language used to refer to autistic students*
Provision reference	*Code 13: Using specific terms to refer to autism provisions*

Code 1: Using quotes from students and parents

One way of showing how the universities listen to the autistic students' voices is to include their comments and their parents' comments. 3 universities out of the 15 used user comments in this way, and all of them were used to support claims regarding the effectiveness of their disability support. It is also a way to advertise their support. In this sense, the use of quotes might be viewed as being more in the spirit of celebrating their services than being inclusive.

Student and parent comments were used to indicate the effectiveness of four different disability services and to advertise these services (support worker, transition services, mentoring and support with social skills). At Bath Spa University (2017), one student commented on the effectiveness of the support worker service: *'The fact that I've been able to have a support worker has been an enormous help to me, keeping me on track with my work, as well as being a friendly face who I know will help me to relax'*. In this quotation, the

student comment was used as an advertisement by the university to support their claim regarding how helpful their support worker services are.

Regarding transition services, York St John University developed an early start programme to ease the transition from school to university. They used a parent's comments to show how effective the programme was in supporting students on the autism spectrum: *'Can I say how impressed my husband and I were with the early start programme. It was clear a lot of planning went into it'*, *'It allowed students to find like-minded friends in a relaxed atmosphere that was not too overwhelming'*. Another parent's comment was also helpful in demonstrating the effectiveness of the disability services at York St John. The comment was *'My son was very nervous and anxious on the first morning, but by the end, he was a different young man, feeling confident'* (York St John University, 2017). In some ways, this quote stands in contrast to those only evaluating services, as this quote is likely to reassure as well as inform and so the use of quotes may be serving a purpose other than noting effectiveness or satisfied service users and advertising the services. Glasgow Caledonian University (2017) used two student comments to communicate the positive feedback they received on the mentoring programme at the university. The first comment was: *'I can do the academic work without any problem. It's all the other stuff that you have to deal with at university that I don't deal with so well. And that's what my Mentor helps me with'*. The second student's comment was *'Having a Mentor really helped my confidence... Just someone to talk to on a regular basis... My Mentor helped me organise and plan for the week ahead, and I can't imagine how I would have got through Uni without that help'*. The information here could easily have been communicated amongst a list of services; the use of the student's voice here adds a sense of the personal value placed on this support rather than merely pointing to its existence. So, while student voice can be used to carry the message 'what we offer is effective' or 'what we offer is appreciated', the use of quotes here carries other messages too. Finally, Glasgow Caledonian University also communicated the positive feedback they received on their social skill support group Socialeyes. Student comments included: *'I enjoyed the calm environment, relaxed atmosphere and friendly staff. It's a very private and confidential class'*; *'The classes are very informative, conversational and fun'*; *'It was helpful to learn when eye contact is appropriate and how it makes others feel in certain situations'*; and *'As a nursing student, my course places a strong emphasis on social skills. Socialeyes was a good starting point for working on my social skills and gave me more confidence in*

placement. It has also made it easier for my mentor and me to talk about my skills at one-to-one meetings' (Glasgow Caledonian University, 2017).

Based on the autistic students' and their parents' comments, it can be concluded that the use of these quotes helped the universities to advertise their disability services, give evidence regarding the effectiveness of their disability services, but also to reassure and encourage prospective students who are on the autism spectrum to access disability services at the university by sharing more personal experiences with them. The way the reader perceives this use of quotes, therefore, might be to see a cynical use of feedback data or as an attempt to include service users in the sharing of information.

The next section focusses on the use of different tones when communicating with autistic students and websites visitors in general. The first tone discussed is about the specific use of an advertising tone (other than using students' and parents' quotes).

Code 2: Using an advertising tone
The main focus of this tone was to highlight the merits of what was being offered. This tone was absent in Saudi universities. Some UK universities used an advertising tone by using students' and parents' quotes, as mentioned in the previous section. In addition to this, Leicester University (2017) used an advertising tone to advertise their AccessAbility Centre. They stated that *'many students with Asperger syndrome/autism spectrum condition (AS/autism spectrum) use the AccessAbility Centre on a regular basis'*. Suggesting that something is already well thought of and popular is a common advertising trait. Another example is York St John University (2017) which advertised their disability services by 'speaking' to autistic students directly by saying that *'you will be able to take part in loads of interesting and fun activities which will introduce you to university life and study'*. Both of these statements also used an encouraging tone in order to encourage autistic students to access disability services. The second statement also has a welcoming tone. Due to this overlap, the encouragement tone followed by the welcoming tone will be presented in this order to highlight both the similarities and differences.

Code 3: Using an encouraging tone
Neither of the Saudi universities used an encouraging tone; however, some UK universities used it. Two were mentioned in the previous section (Leicester University, 2017, and York St

John University, 2017). Here, the encouraging tone will be discussed in relation to helping students access disability services in general, access services related to exam arrangements and practising social skills taught in the social skills group.

The following universities provide examples of the first point: University of Surrey (2017) indicated that *'accessing support can often help'* and *'If you have Asperger syndrome /autism, then we would encourage you to contact the ALS department now'*. Another example is from the University of Leicester (2017): *'If you know that you have AS/autism spectrum, then please come into the AccessAbility Centre to discuss your support requirements and to find out about the support available to you'*. The University of Leicester (2017) also added, *'It is better to tell us than it is to muddle along being misunderstood and misjudged'*. UCL (2017) also stated: *'We encourage you to make contact with us so we can help identify services appropriate to your individual needs'*. The second aspect is about the use of an encouraging tone to encourage autistic students to access examination arrangements; University of Surrey indicated that *'it is extremely important that you come and see us as soon as possible if you need examination adjustments as there is a deadline date for submission'*. In terms of the encouragement to practise social skills, Glasgow Caledonian University (2017) stated that they *'encourage participants to try out some of the material covered in class'* and they *'offer one-to-one meetings with a mentor to allow'* the student *'to do this'.* The reported encouraging remarks carry different kinds of emphasis, from the highly empathic that show that the university wants to understand how autism affects the autistic students to the almost instructional statements that claim to understand what is best for the autistic student. The use of an encouraging tone sometimes implies a welcoming attitude by the disability services providers. The use of a welcoming tone will be discussed in the next section.

Code 4: Using a welcoming tone
The use of a welcoming tone can take many forms. As mentioned in the above section, encouraging autistic students to access disability services is one way of welcoming these students. Advertising disability services is another indirect way to welcome autistic students, as mentioned in the advertising tone section. In terms of explicitly stating a welcome, 3 UK universities out of 15 used this explicit tone in their websites, to welcome prospective students to access disability services. The UCL and UCL (IOE) both stated that *'prospective students are welcome to contact'* the disability services team (UCL, 2017). Similarly, the

University of Leicester (2017) stated *'Please feel free to contact us or come into the AccessAbility Centre when you visit the university'*.

Code 5: Using an advisory tone
Universities who used an advisory tone in their text sometimes seemed to position themselves as 'expert' providers of disability services because they claim to have the experience that allows them to advise the autistic students. Some UK universities seemed to adopt this tone in order to advise autistic students to access services or to disclose their disabilities. Given the focus of many of these advisory comments on disclosure and access, there appeared to be a belief that students might be reluctant to use disability services. This raises the question of whether the advisory tone adopted here is the most likely form to increase disclosure and access. An example of the use of advisory tone in relation to disclosing autism was evident in the University of Leicester (2017), which made this recommendation to autistic students to encourage disclosure: *'We advise students to let us know if they have AS/ASD so that support can be made available and so that everybody – the student, AccessAbility staff, the student's Personal Tutor, the AccessAbility Tutor for the department and their parents/carers can keep in touch with each other and solve minor problems before they become major issues'*. In terms of examples related to the use of advisory tone to encourage access, these examples were previously given in the encouraging tone section and evidence was provided in regards to helping autistic students to access disability services in general, access services related to examination arrangements, and practising social skills taught in the social skills group. The use of an advisory tone thus sometimes overlaps with an encouraging tone.

In a statement made by Leicester University (2017), advisory, encouraging and advertising tones all overlapped: *'Many students with Asperger syndrome/autism spectrum condition (AS/autism spectrum) use the Accessibility Centre on a regular basis'*. In this statement, the disability service providers advised and encouraged prospective students to follow in the footsteps of other students on the autism spectrum, indicating that many current autistic students accessed support regularly. At the same time, the providers of disability services advertised their services by stating that their services attracted many students with autism.

Code 6: Using an empathetic tone
3 UK universities out of the 13 (and neither of the Saudi universities) showed empathy in their texts, for example, by using terms such as *'we understand'* or *'we recognise'*. There

seem to be two aspects of an empathetic tone: empathy regarding difficulties and challenges students might face during the transition to university and empathy regarding challenges the student might face once they begin university.

Regarding the first aspect, York St John University (2017) indicated that they *'recognise that the transition from living at home to university can be stressful (especially for students on the AS spectrum)'*, and Glasgow Caledonian University (2017) also stated that *'GCU recognises that making the transition from school or college to university can be stressful and worrying for all applicants. We also recognise the additional challenges and anxieties that may be experienced by applicants on the autism spectrum'*. This statement by Glasgow Caledonian University also used the uncertain tone by using the modal verb *'may'*. The meaning related to the use of uncertain tone will be discussed in the next section.

Regarding the second aspect, Bath Spa University (2017) pointed out that *'starting University can be an exciting but also daunting time for any new student; for students on the autism spectrum, meeting new people, adjusting to new routines and environments can be challenging'*. Another example of recognising the challenges of starting at university is from Glasgow Caledonian University (2017) who indicated that *'GCU recognises that coping with student life, finding your way around such a large institution, and managing your studies independently, is a daunting prospect for many students'*. They also recognise *'the additional challenges and anxieties that may be experienced by students on the autism spectrum'*. Using an empathetic tone might be an indicator that the universities position themselves as 'experts' in understanding a lived experience as distinct from being experts in an identified condition, which are different kinds of expertise.

Code 7: Using an uncertain tone
The use of uncertainty here is not about a perceived lack of knowledge or understanding but to indicate that they are not making assumptions about students. Often this uncertainty is expressed through the use of tentative language and modal verbs such as 'may', 'could' and 'might'. Providers of disability services used this tone in two ways. The first was to show their understanding of autism's effects on students, and that autism affects students in different ways. For example, Glasgow Caledonian University (2017) stated that they *'recognise the additional challenges and anxieties that may be experienced by applicants on the autism spectrum'*. Another use of an uncertain tone by providers of disability services was

to show that they are uncertain about what services can help autistic students. Thus, they show a sense of flexibility. For example, the UCL and UCL (IOE) stated that autistic students might benefit from the information provided for prospective students without disabilities (UCL, 2017). They also stated that planning might help them *'manage learning and other aspects of university life'* (UCL, 2017).

Another example is from the University of Surrey (2017), which listed some sources of support and stated that they *'may help'* the student in his or her studies and university life. For example, they said, *'Types of support could include liaison with academic and support staff to help you settle into your new life without too many difficulties'*. The use of an uncertain tone in these statements also seems to position the university as a 'flexible' provider of disability services. Similarly, the University of Derby (2017) used an uncertain tone to communicate their flexibility in providing support. First, they stated that they discuss with the student his or her individual requirements. Second, they used an uncertain tone when directing the student to other sources of information: *'On this website, you can also find information on how to prepare for university, what to expect in your first week and other information that might be helpful'*. It can be concluded, that the use of an uncertain tone is a way to demonstrate an understanding of autism as complex and diverse with a range of individual consequences requiring personal specificity in the services autistic students are presumed to need.

Code 8: Using an imperative tone
Using an imperative tone indicates that the university positions itself as an 'expert' in delivering disability services. In general, the imperative tone was used to give instructions to autistic students (instructions about how to apply for the DSA, asking the student to contact the disability advisor, asking the student to bring his or her assessment report, asking the student to contact the disability team, instructions regarding requesting examination arrangements and giving instructions regarding a diagnosis report). For example, the disability team at Bath Spa University (2017) asked autistic students to *'Apply for Disabled Students' Allowances'*. Bath Spa University also gave instructions about contacting the disability advisor, and the University of Kent (2014d) communicated a similar message: *'you will be asked to attend a meeting with a Student Support Advisor'*. The University of Surrey (2017) asked autistic students to *'bring along'* their *'assessment report'*. The University of Derby (2017) asked autistic students to get in contact as soon as possible, and the University

of Kent (2014d) used an imperative tone to encourage autistic students to get in contact. Glasgow Caledonian University (2017) used an imperative tone to give instructions about whom to contact if students have queries: *'All queries regarding Student Mentors for students with a diagnosis on the autism syndrome should be directed to the Disability Team'*.

The University of Leicester (2017) asked autistic students to *'bring a copy of a document that states you have AS/autism spectrum'*. Similarly, the University of Kent (2014d) said, *'You will be asked to provide evidence of disability, such as a doctor's letter or psychological report'*.

In terms of the use of the imperative to give instructions regarding requesting examination arrangements: *'University of Surrey indicated that 'it is extremely important that you come and see us as soon as possible if you need examination adjustments as there is a deadline date for submission'*. They added: *'Please do not leave it until the deadline date - that may be too late'*.

Finally, KSU heavily used the imperative tone to define an acceptable diagnostic report: *'These documents should not be older than three years'*, *'The diagnostic report must be from a specialist certified in diagnosing autism'*, *'The report must include the name, position and qualification of the specialist. In addition, the report must include the date the diagnostic test was conducted'*, *'The report must be recent, meaning it has been issued within the past three years'*, *'The report must clarify the reasons for diagnosis'*, *'The report must include the student's diagnosis and the severity of his or her condition'* and *'The report must include recommendations regarding the required services based on tests results and clinical observation'* (KSU, 2013:33). The use of the imperative tone is a sign that these documents were written for a specific purpose, which is giving information/instructions to autistic students before and during their time at the university. The use of this tone can signal authority and competence. It can also be clear and precise, ensuring that correct procedures are followed. At the same time, it can appear distant and remote suggesting that procedures and documents take precedence over individual needs.

Code 9: Using a promising tone

A promising tone was used by two UK universities and one Saudi university. The rest of the universities did not use this tone. A promising tone shows that these universities consider the

importance of developing their disability services. For example, York St John University (2017) runs a social group for autistic students to help them make friends and participate in a range of activities together. However, *'it is currently facilitated by staff… and the university ambition is for it to become a social group that is run for the students, by the students'*. Similarly, Nottingham Trent University (2017) stated that they are *'constantly developing the support'* they *'offer to students'* and told them to *'look back in the future for innovative new developments'*. Another example is KAU, which stated that their vision is to become *'a pioneer in special needs services'* (Dean of Student Affairs, 2013a). The promising tone is, therefore, linked to future intentions and visions. The contrasts in the nature of this vision can be seen by comparing York St John's vision of increasing student participation and the vision of KAU to be a leader in the sector. In order to conclude the importance of this distinction, it is crucial to consider how these different messages are read and interpreted within their context.

Code 10: Using a segregating tone

The only university that used this tone was KAU. This tone indicates that gender differences were stated when discussing disability services provision. The disability services at KAU are segregated based on the student's gender. In the documents that were found on the website for female students, the university stated that the Special Needs Centre is for *'Female Students at King Abdul Aziz University'*. They also stated that they *'facilitate the inclusion of female students with special needs at the university by enabling them to participate in all female student activities'*. In the female section of the university website, the university stated in 12 different places that their services are designed specifically for *'female students'*; for example, they *'provide a variety of related services and counselling that enable the female students with special needs to continue their education and effectively participate in employment'* (Dean of Student Affairs, 2013a). Similarly, in the male section of the university website, the university stated in 18 different places that their services are designed and delivered for *'male students'* only. For example, *'a comprehensive centre called the 'Special Needs Centre' was established within the office of the Dean of Student Affairs to serve the university's male students'* (Dean of Student Affairs, 2013 a).

The next section presents the findings regarding the use of questions in the texts for different purposes.

Code 11: Using questions that show empathy, knowledge about autism and questions to frame information

To use a question as a linguistic form implies a knower who has the answer and a questioner who doesn't. The examples of the use of questions on the websites position different people as the questioner; sometimes it is the general public, sometimes the student, but generally it is the service provider who is positioned as the one who knows the answer.

Several UK universities used questions and three different purposes could be identified: to show empathy, to demonstrate knowledge about autism and to frame information. First, Bath Spa University (2017) showed empathy by asking: *'What is Asperger syndrome and how might it affect me in university?'* In this example, the questioner is the student. The same question is also an example of using questions to demonstrate knowledge about autism as the one providing the answer is the provider. Another way of showing knowledge about autism was by University of Worcester (2017) which asked the question: *'What is Asperger Syndrome?'* This question is used to frame information. Four other UK universities used questions to frame information. Bath Spa University (2017) used the following questions for this purpose: '*What is Asperger syndrome, and how might it affect me in university? What provision is available? And how do I access this support?*' York St John University (2017) also used questions to frame information regarding social support: *'What is Stratus?' 'Who is Stratus for?' 'When and where is Stratus Social?' 'What things do we do?' 'Who can I contact about Stratus?' 'What we do?' 'How do I sign up?' 'Why join?'* They also used questions to introduce their writing project: *'What is the Stratus Writers Project?' 'How did the project work?' 'What did the Stratus Writers Project do next?' 'Will we be doing other projects in the future?'* The University of Sussex (2016) used the question: *'How to access our service?'* to give students information and guidance regarding accessing support at the university. Finally, Glasgow Caledonian university used questions to frame information about their mentoring programme: *'What do Student Mentors help with? What have other students said about having a Mentor?'* They also used questions to frame information about the social skills group:*'What is Socialeyes? What happens in the workshops? Is there homework to complete? What have other students said about Socialeyes? And how do I find out more, or sign up?'* There is an assumption in all these questions that the provider knows the questions students are likely to ask. What is not known, however, is whether these are the questions students would ask. It is perhaps more likely that the 'question-answer' format is

simply a design feature for sharing information rather than representing real questions being asked.

The next section presents the use of terms to refer to autistic students in the texts.

Code 12: Form of the language used to refer to autistic students

Most UK and Saudi universities used person-first language to refer to autistic students, and identity-first language was used least often. Person-first language means using the word 'student' followed by the condition the student has (here, autism) or followed by the word 'special needs'. Thus, the person is foregrounded rather than the condition, for example, a '*person with Asperger syndrome*' (Bath Spa University, 2017), *'students who have autistic spectrum conditions'* (UCL, 2017), *'Applicants on the autism spectrum'* (Glasgow Caledonian University, 2017), and *'Students with special needs'* (KSU, 2013:5). Identity-first language means calling the person by his or her disability first and this is led by believing that the disability is central to the person's identity (Collier, 2012). The significance of these language choices was discussed in the literature review chapter in the section (2.2.3.) and will be returned to in the discussion chapter.

Regarding the use of the term *'special needs'* alongside person-first language, only Saudi universities used this term to refer to autistic students and none of the UK universities used the term 'special needs' or 'disability' to refer to these students. Autistic students at KSU (2013:3) and KAU (Dean of Student Affairs, 2013a) were referred to as students with special needs. For example, this statement was found in a text from KSU: *'university students with special needs'* (KSU, 2013:3), and KAU used the term *'female students with special needs'* in six different places on their website and the term *'male students with special needs'* in nine different places in their website. At the time of collecting this data, there was no official terminology that HE had to use in SA, however, recently the Saudi King urged all public and private institutions/agencies to use the terms 'People with disabilities'. This will be discussed further in the discussion chapter.

Regarding the use of identity-first language, the term 'autistic students' was used by only one UK university and one Saudi university (York St John University and KSU). This means that KSU used identity-first language alongside person-first language *'a student with autism'* and they also referred to autistic students as *'university students with special needs'* as mentioned

above. Again, the literature review discussed this language choice in section (2.2.3.) and the discussion chapter will discuss this further.

To describe autism, the Saudi and UK universities used the terms 'autistic' and 'autism' (KSU, 2013:3-4; York St John University, 2017). However, the UK universities' websites were more inconsistent in their use of terms to describe autism. For example, they sometimes described it as a condition: *'Autism Spectrum Conditions'* and *'Autistic spectrum conditions'* (Nottingham Trent University, 2017; UCL, 2017). Other times, they described it as a disorder *'autistic spectrum disorder'* (Newman University, 2017) or as a spectrum *'autistic spectrum'*, *'autism spectrum'*, *'on the autism spectrum'* (e.g., Newman University, 2017). Additionally, they described it as a difference *'autism spectrum differences'* (University of Leicester, 2017) or as a syndrome *'Asperger syndrome'*, *'Asperger's Syndrome'* (e.g., University of Leicester, 2017). Finally, they sometimes called it *'Asperger's'* or *'Asperger'* (e.g., York St John University, 2017).

Code 13: Using specific terms to refer to autism provisions
Three UK universities used three different terms to refer to autism-specific services: *'condition-specific support'* (Bath Spa University, 2017), '*AS/ASD support'* (University of Leicester, 2017) and *'Autism support'* (Nottingham Trent University, 2017). The use of these terms appears to be a way of separating autism support from generic support that is offered for students with and without disabilities.

To sum up, it should be noted that there were overlaps between these codes, and so, for example, a statement might be both advisory and imperative; in each case the salient characteristics of each code were drawn out and overlaps were discussed. The next section is an illustration of what expert and flexible providers mean in the studied texts.

4.2.1.5. 'Expert disability provider' and 'flexible disability provider'

Based on an analysis of the data in stage two, providers can be positioned as 'expert providers of disability services' and/or 'flexible provider of disability services'. 'Expert providers of disability services' for students with autism can be defined as providers who position themselves as 'experts' in autism by defining and communicating an awareness of autism's impact on students, the difficulties these students may face in HE settings and an

understanding of specific support needs. Also, they position themselves as 'experts' in providing autism services; that is, they appear to portray themselves, rather than the students, as 'experts' in autism support. This position can take different forms: for example, designing and delivering services to the students without apparently listening to the students' voices or working collaboratively with them. Expert providers may use an advisory tone; they give advice and guidance that places them in the position of professionals who know what works best for autistic students. At times, they use an imperative tone; they seem to view themselves as professionals who have the experience that allows them to give instructions to autistic students. At other times expert providers use a tone of encouragement that indicates that they know how to help autistic students and motivate them to do certain things (e.g. access disability services as soon as possible). Finally, expert providers might use an empathetic tone. They position themselves as experts in understanding autism and therefore, show empathy regarding what the student experience before and during their time at the university.

On the other hand, 'flexible providers of disability services' seem to consider autistic students as partners in developing and delivering disability services. They are flexible in that they seem to listen to the students' voices and adapt their disability services accordingly and/or they seem to discuss the individual needs of the autistic student with him or her (adopting a person-centred approach), which means flexibility in providing disability support. Flexible providers show an understanding that 'no two students are alike' and, therefore, they use flexible approaches and methods of support. In addition, flexible providers seem to work more collaboratively than expert providers in terms of seeking input from others inside and outside the university and with the autistic students themselves. This attitude is indicative of flexibility because it means they consider other perspectives when designing and delivering disability services (e.g. the students' perspective might be different from that of the provider). Furthermore, flexible providers communicate that disability services are offered for both diagnosed and undiagnosed students. They are flexible in terms of not excluding undiagnosed students from accessing disability services and support. Finally, flexible providers might use an uncertain tone when communicating their services to show that they are not set in their opinions and that the door is open for discussion regarding an individual student's needs.

In conclusion, the analytical units' message, assumptions, forms and their analytical questions led to the emergence of many codes. Each code revealed the meaning that

underpinned the text and helped provide a deep understanding of what the text was trying to communicate to the visitors of the disability services websites.

4.2.2. Data presentation for the thematic analysis for stage two

Appendices 14 and 15 are both examples of how the thematic analysis was coded. This section responds to the second research question in relation to stage two of this research. The question is: **What provisions are available for autistic students, according to the university's website?** The findings are organised into three themes that reflect chronology in relation to the time at university: 1) Support before entering the university; 2) Support while studying at the university/college; and 3) Preparation for life after university (See figure 4).

Figure 4: Provision available for autistic students, according to the universities' websites
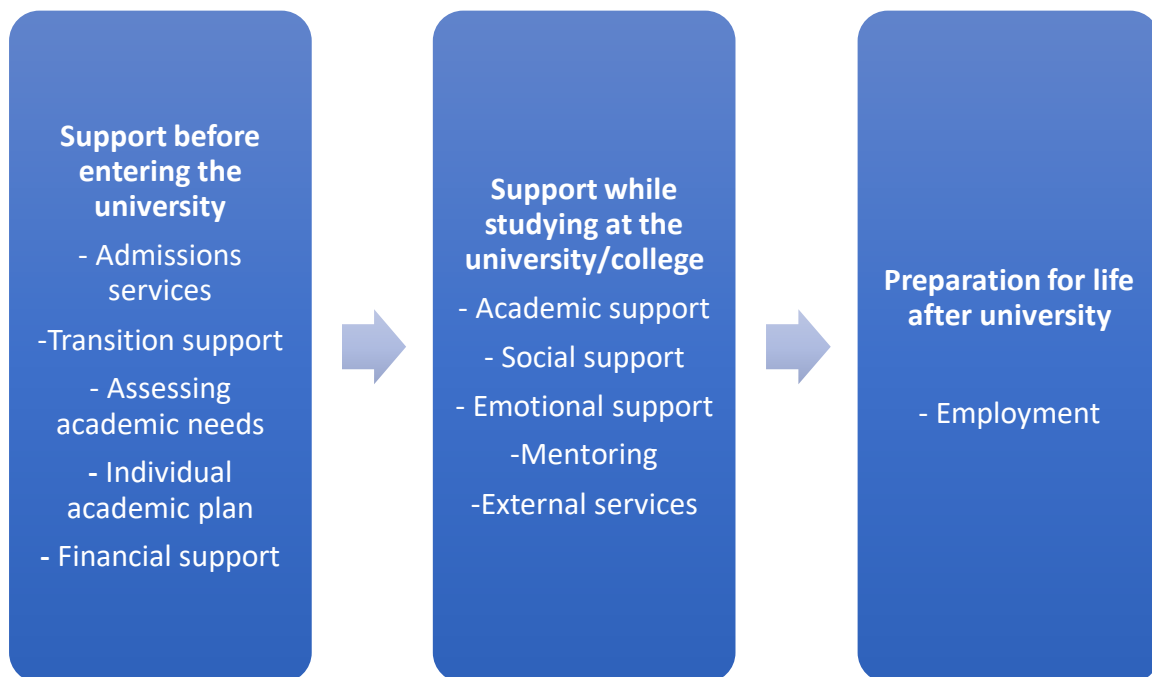
Each central theme contains several sub-themes (as shown in figure 4) and will be discussed below.

4.2.2.1 Theme 1: Support before entering the university

Support before entering the university was related to the support that the universities claimed to offer to autistic students between secondary school and HE. It can be divided into five sub-themes: admissions services, transition support, assessment of academic needs, setting an individual academic plan and financial support.

Sub-theme 1: Admissions service

This sub-theme refers to the support offered by universities' disability services to autistic students when they want to apply to the university. While this might seem to be useful, only one Saudi university claimed to offer such support and none of the UK universities mentioned admissions services for autistic students. KAU indicated that they *'help female students in the registration process'* (Dean of Student Affairs, 2013a). Perhaps the support regarding admission for students with disabilities including students with autism is mentioned elsewhere on the universities' websites and this was not specifically mentioned in the disability services websites as a kind of support.

Sub-theme 2: Transition support

Transition services refer to the support that the universities claim to offer before the start of the student's course at the university. Transition support takes many forms. First, the opportunity for an early move into halls where the student can *'undergo early induction'* (Bath Spa University, 2017), *'To help settle in'* (York St John University, 2017). The early move to university accommodation was not commonly mentioned however; only these two UK universities provided information regarding this support (Bath Spa University and York St John University) and neither of the Saudi universities mentioned this service. A second form of transition support is providing a tour inside and/or outside the campus (York St John University, 2017 and University of Derby, 2017). A third form is meeting the programme leader before the start of the academic course in order to liaise with students regarding their needs (e.g. Newman University, 2017). A fourth form is the special transition provision such as a summer programme (Glasgow Caledonian University, 2017), an early start to induction week (University of Surrey, 2017) or an alternative Fresher's week (York St John University, 2017). This was sometimes arranged with an external organisation. According to the universities' texts, transition services aim to offer *'smoother transition'* (Glasgow Caledonian University, 2017), offer a *'calm and supportive environment'* (York St John

University, 2017) and help the autistic students settle into university life (University of Surrey, 2017).

Sub-theme 3: Assessment of academic needs

5 universities out of 15 mentioned this type of service, *'assessment of academic needs'*. According to Glasgow Caledonian University's website (2017), autistic students are assisted with *'assessment of needs prior to the start of the academic session'*. At the University of Sussex (2016), assessment of academic needs aims to assess the student's *'study support requirements'* (University of Sussex, 2016). In terms of UCL and UCL (IOE), they both indicated that assessment of academic needs can be *'carried out at an accredited assessment centre'* (UCL, 2017). Assessing study support requirements can also include *'Dyslexia assessment'* for students with autism who have the need for such assessment (University of Leicester, 2017).

Sub-theme 4: Setting an individual academic plan

Setting an individual academic plan was mentioned by two universities: Bath Spa University (2017) called this an Academic Access Plan and KAU called it *'Special needs plan or case study'* (Dean of Student Affairs, 2013a). The rest of the universities did not mention individual academic plan.

Sub-theme 5: Financial support

This sub-theme refers to any support related to funding for autistic students. In SA, disabled students receive funding from the government, although this funding does not have a specific name. However, neither of the Saudi universities mentioned that this funding was available as a means of support for autistic students according to the universities' texts. This information might be available in other websites (e.g. government websites), however the sample for this research is the universities' disability services' websites only. In the UK, disabled students may be eligible for Disability Student Allowance (DSA) funding. 9 of the 13 UK universities drew attention to DSA funding. According to the findings of this research, these universities presented information about financial support in three different ways: first by providing general information about DSA, second by talking about providing advice on applying for funding, and third by discussing services related to the DSA. In terms of the first aspect, providing general information about the DSA, it was found that

eight universities informed autistic students that the DSA is limited to UK students (e.g. UCL, 2017).

Another point is that the autistic students are informed that once they provided evidence of disability they would be invited to apply for the DSA (University of Kent, 2014d) and some universities informed autistic students that the financial support was an extra help and a way of accessing additional services (e.g. Bath Spa University and Nottingham Trent University, 2017). In regards to providing advice on applying for funding, four UK universities indicated that they provided assistance and advice with an application for the DSA. Finally, in terms of discussing services related to the DSA, Bath Spa University (2017) stated that the DSA could cover the cost of:

- *'specialist equipment, like computer software'*
- *'non-medical helpers, like specialist study skills support or a mentor'*
- *'extra travel costs you have to pay because of your disability'*
- *'consumables, like photocopying'*.

Newman University (2017) and Nottingham Trent University (2017) both stated that the DSA could be used for mentoring services and UCL and UCL (IOE) stated that services would depend on the autistic student's needs.

4.2.2.2. Theme 2: Support while studying at the university/college

This theme refers to the support that the universities claim to offer during the student's course of study at the university. It has five sub-themes: academic support, social support, emotional support, mentoring and external services.

Sub-theme 1: Academic support

This sub-theme relates to any support the universities claim to offer to autistic students to meet their academic needs. There was rich information provided by the Saudi and UK universities regarding this type of support. All of the universities mentioned one or more kinds of academic support, apart from the University of Kent due to the limited information provided on their website. Information regarding academic support can be divided into different aspects: first, as noted before, some academic support is provided prior to the start of a university course. In addition, universities claimed that they provided support for autistic students during their courses. This includes note taking *'in lectures and seminars'*

(University of Worcester, 2017). Furthermore, the universities claimed to offer handouts of the lectures *'in advance of teaching sessions'* (UCL, 2017). In addition, educational support during the student course included providing computers and/or assistive technology. The use of computers and/or assistive technology were both mentioned as a means of supporting autistic students during examinations (Bath Spa University, 2017) or during their studies by providing mind-mapping programmes (UCL, 2017). In addition, assistive technology can be used for note taking (KSU, 2013:56), such as a dictaphone to enable the student to listen to lectures again (Newman University, 2017). In addition, the academic support provided during the programme of study included study skills sessions, which could be one-on-one sessions (University of Worcester, 2017) or interactive workshops (York St John University, 2017). Examination arrangements also included academic support provided by the universities during the student's course of study. They claimed to provide extra time during examinations (e.g., KSU, 2013:54; UCL, 2017) or a small room where the student could take their examination (UCL, 2017). Several universities provided extensions for assignments, alternative modes of assessment (Dean of Student Affairs, 2013a; University of Sussex, 2016) or preparation for the change in routine during examinations (University of Derby, 2017). Also, the University of Bath (2017) provided support workers who could assist in keeping the student on track with their work and act as a friendly face to help the student relax (Bath Spa University, 2017). Support workers can also be considered as extra support, which will be discussed later in this chapter. Additionally, support workers mentor students *'to help with organising and planning assignments and keeping on task'* (Newman University, 2017). They also can assist *'with time management and organisational skills'* (University of Surrey, 2017).

Another academic support provided during a student's academic courses relates to library services, including extensions on library loans (e.g., Bath Spa University, 2017) and information on how to access libraries and materials (UCL, 2017).

Human resources (e.g., study advisor, supportive staff and/or faculty members, peers and assistant teachers, etc.) are another type of academic support that the universities provided. According to UCL (2017), staff and faculty members are informed about the autistic students' needs. Peers are also trained to work with autistic students to help students with academic issues, such as academic writing (Nottingham Trent University, 2017). Finally,

KSU indicated that they provide the student with the *'opportunity to work with an assistant teacher at home, if needed, at their own cost'* (KSU, 2013:54).

Sub-theme 2: Social support

This sub-theme is about any support the universities claim to offer to the autistic students to meet their social needs. It includes peer mentor schemes and social skills training. Peer mentor schemes were previously mentioned as a way of developing the autistic students' academic skills; they can also be a way of developing social skills. For example, Newman University (2017) states that it provides *'A buddy during freshers' week or at the start of term'* to help autistic students. In terms of social skills training, this was provided through mentors (Glasgow Caledonian University, 2017) or social skills training programmes that could help the student in *'making friends'* and in *'group work situations'* (Glasgow Caledonian University, 2017). Social skills training for some universities also included building relationships between autistic students by putting them in touch with each other (University of Kent, 2014d and Newman University, 2017).

Sub-theme 3: Emotional support

Emotional support is any support the universities claim to offer to autistic students to meet their emotional needs. It was mentioned by some universities. KAU stated that the *'disability advisor could offer support to the male student to help in overcoming social and psychological difficulties'*. This emotional support was not evident in the other Saudi university. In terms of the UK universities, UCL and UCL (IOE) stated that *'Student Psychological Services - Provides counselling and other resources for students* [with autism] *facing emotional and psychological problems'*. This support might be needed for some autistic students who have mental health issues associated with their disability.

Sub-theme 4: Mentoring

Mentoring means support provided by disability advisor, peers and support workers. In terms of the provision of a disability advisor, this was the most mentioned service, mentioned by 10 universities. According to Bath Spa University (2017) and UCL (2017), the student can have drop-in sessions with a disability advisor and, at the former university, can talk with him or her about their Academic Access plan (Bath Spa University, 2017). The role of the disability advisor is broad, they also can help the students with the diagnosis process they *'offer advice and guidance on the procedure for a formal assessment and how to go*

about this'. The disability advisor can also help with the registration process with the disability services at the university and can help the student with requesting *'reasonable adjustments'.* Also, the disability advisor can support the student who needs assessment of educational needs (University of Leicester, 2017). In regards to their roles in the Saudi context, KAU stated that the *'disability advisor can offer support to the male student to help in overcoming social and psychological difficulties'* (Dean of Student Affairs, 2013a). Also, they can familiarise the autistic student *'with the campus facilities, key staff and services'* (University of Surrey, 2017).

In terms of peers, universities seemed to provide different types of support. For example, Bath Spa University (2017) stated that *'Peer Mentors can help to answer questions about your course, finding your way around campus and where to go in Bath. They can share their own experiences of student life such living in halls, budgeting';* they can also *'work alongside Disability Team colleagues assisting in the ongoing support of students'* (Glasgow Caledonian University, 2017). Also, according to Glasgow Caledonian University (2017), *'Student Mentors are typically graduates of GCU, so know exactly what being a student at GCU is like!', 'Student Mentors assist students to develop independent sustainable strategies which help overcome barriers arising from aspects of their autism profile'.*

The information about support workers was the second least mentioned services in term of theme two (Support while studying at the university/college). For example, a support worker can meet with the student *'regularly'* to provide *'one to one support'* (University of Derby, 2017).

Sub-theme 5: External services
This sub-theme dealt with the services that are offered to autistic students by external bodies. Seven UK universities provided links on their websites to external organisations, such as to the National Autistic Society (UCL, 2017) and specialist autism services (York St John University, 2017). Accommodation services include early move into the halls of residence that was mentioned as a transition service above. This means that the university can offer extra support for autistic students in regard to their accommodation. According to Bath Spa University (2017), *'In some circumstances living in University halls for the duration of your studies can be considered'.* Furthermore, the University of Sussex (2016), indicated that they could *'liaise with Residential Services over accommodation issues'.* This is a way of helping

the autistic student when they face any difficulties related to housing. Finally, medical care was the least-mentioned support among the other external services. It was mentioned by KAU only, who stated that they *'facilitate medical examination'* and *'provide medical care through coordination with a private hospital'* (Dean of Student Affairs, 2013a).

4.2.2.3. Theme 3: Preparation for life after university

This theme is about any support universities claimed to offer to autistic students in order to support them after their graduation from the university; this themes is entirely about.

Employment
Some universities provided support that was intended to develop autistic students' employment skills. As mentioned earlier, this type of support was mentioned by few universities (one Saudi and three UK) and the information provided regarding this support was limited. The Saudi university indicated that *'The centre informs the private and public business sectors about male graduate students with special needs from King Abdul Aziz University'* (Dean of Student Affairs, 2013d). This seems to suggest that they collaborate with business sectors in order to provide employment opportunities for disabled students in the university, including autistic students. In terms of the UK universities, Nottingham Trent University, (2017), UCL and UCL (IOE) (UCL, 2017), listed that they provide employment support without giving details about the nature of this service.

In conclusion, perhaps unsurprisingly, most of the universities seem to focus on support for autistic students before and during their study. That some of the universities gave thought to preparation for university life, and displayed this in their website information, while others considered offering support for life after university, created a contrast to the more typical emphasis and suggested that there was a wider vision to be had regarding the role of support services.

4.3. Data presentation for stage three (content analysis and thematic analysis): How are disability services organised at SA and UK universities?

This section presents the findings of stage three of the research study. Four universities (KSU, KAU, Sheffield Hallam University and the University of Kent) were purposively selected, as explained in the methodology chapter, because they seemed to develop specific provisions for autistic students according to their websites. Content analysis was conducted to examine the similarities and differences between the four universities in terms of their stated provision for autistic students and thematic analysis was implemented to identify the influences that seemed to shape how disability services in general, and disability services for autistic students in particular, are organised (See Appendix 9 which is an example of how content analysis and thematic analysis were coded in one UK university –Sheffield Hallam University)

4.3.1. Data presentation for the content analysis for stage three

Content analysis was used to answer this research question: What are the similarities and differences between the two Saudi and two UK universities in terms of disability services for autistic students? This was a deductive content analysis, which means the coding was based on predetermined categories based on the literature review (see section 2.2.2). As described in the methodology chapter, 8 categories of disability services were identified, and the analysis was carried out manually to determine if the four universities mentioned these services for autistic students. An Excel file was used to organize the data (see Appendix 10). The disability services that were identified through the literature review were: transition services, financial aid, faculty members/staff training, disability advisor, mental health support, academic support, peer mentors, and social-behavioural support (see table 15). Three main findings emerged from analysing the data. First, information related to **transition services** was absent in all four universities' web information; second, each university mentioned a different set of services for autistic students and no two universities were alike; and third, no service (category) was mentioned in all four of the universities' web information.

Table 15: Categories of the content analysis for stage three

No.	Universities	KSU	KAU	Sheffield Hallam University	University of Kent
	Services (Categories)				
1	Transition services	X	X	X	X
2	Financial aid	X	X	√	√
3	Faculty members /staff training	√	X	X	√
4	Disability advisor	X	√	X	√
5	Mental health support	X	√	X	X
6	Academic support	√	√	√	X
7	Peer mentors	√	X	X	X
8	Social-behavioural support	√	√	X	√

√= mentioned   X=Not mentioned

Neither of the Saudi universities mentioned **financial aid.** It is possible that the disability services providers assume that autistic students are aware of this support, so information about it was not needed on their websites. Both UK universities mentioned that they invited disabled students to apply for the DSA (University of Kent, 2014d and Sheffield Hallam University, 2015a). In terms of **faculty members/staff training**, KSU and the University of Kent provided information about this aspect. KSU gave detailed information with regard to the nature of these services (for example, they stated that they provide training in how the curriculum might be modified for autistic students) (KSU, 2013:55). The University of Kent, however, just mentioned that the disability service is *'committed to the professional development of its staff'* and the training is *'in line with the university's strategic plan'*

(University of Kent, 2014a). In terms of a **disability advisor**, KAU and University of Kent mentioned this role. KAU stated that the disability advisor aims to help the students in *'overcoming social and psychological difficulties'* (Dean of Student Affairs, 2013d), thus also indicating the provision of **mental health support**, which was mentioned by this university only. The role of the disability advisor at the University of Kent was not clarified on the university's website, only that the student would be invited for a meeting with the disability advisor.

In terms of **academic support**, this was mentioned by three of the universities: KSU, KAU and Sheffield Hallam University. In regards to the University of Kent, they did not give details of the nature of their services for autistic students, including not giving information about academic support. However, the other three universities had the following types of academic support in common: supporting the students during lectures (e.g. providing note-taking), providing assistance with assignments and examinations (e.g. extra time), mentoring (e.g. study skills sessions) and providing equipment and software (KSU, 2013:55; Dean of Student Affairs, 2013d; Sheffield Hallam University, 2015a). Academic assessment and services that focused on the learners' needs were mentioned by Sheffield Hallam University and KSU respectively (Sheffield Hallam University, 2015a; KSU, 2013:55). Moreover, Sheffield Hallam University and KAU indicated that they have a learning contract for autistic students (Sheffield Hallam University, 2015a; Dean of Student Affairs, 2013d). Library loan extension was also mentioned as a specific type of academic support by KAU (Dean of Student Affairs, 2013d). **Peer mentors** were mentioned by KSU only, which stated that *'peer tutoring'* is provided for autistic students as a form of academic support.

Finally, **social-behavioural support** was mentioned by three universities (KSU, KAU, and University of Kent). All of these universities stated that they aimed to develop the students' social skills, and KAU added that they achieve this by providing entertainment and social activities inside and outside the university.

The similarities between the Saudi and UK universities are greater than any differences (See figure 5). In terms of the differences, the use of peer mentors and mental health support were mentioned in the Saudi context and not in the UK. Providing such information in the websites does not necessarily indicate that these services exist in practice. However, it seems to communicate that these services (peer mentors and mental health support) are important for the disability services providers and they worth mentioning in the university's website.

Also, the UK universities are different from the Saudi universities in terms of providing information about financial aid for autistic students. The Saudi universities need to inform autistic students about such services.

Figure 5: The similarities and differences between the two Saudi and two UK universities in terms of disability services for autistic students

UK
universities

Financial aid

- Faculty members /staff training,
- Disability advisor,
- Academic support,
- Social-behavioural support

No Transition services

Saudi
Universities
Peer mentors
and Mental health support
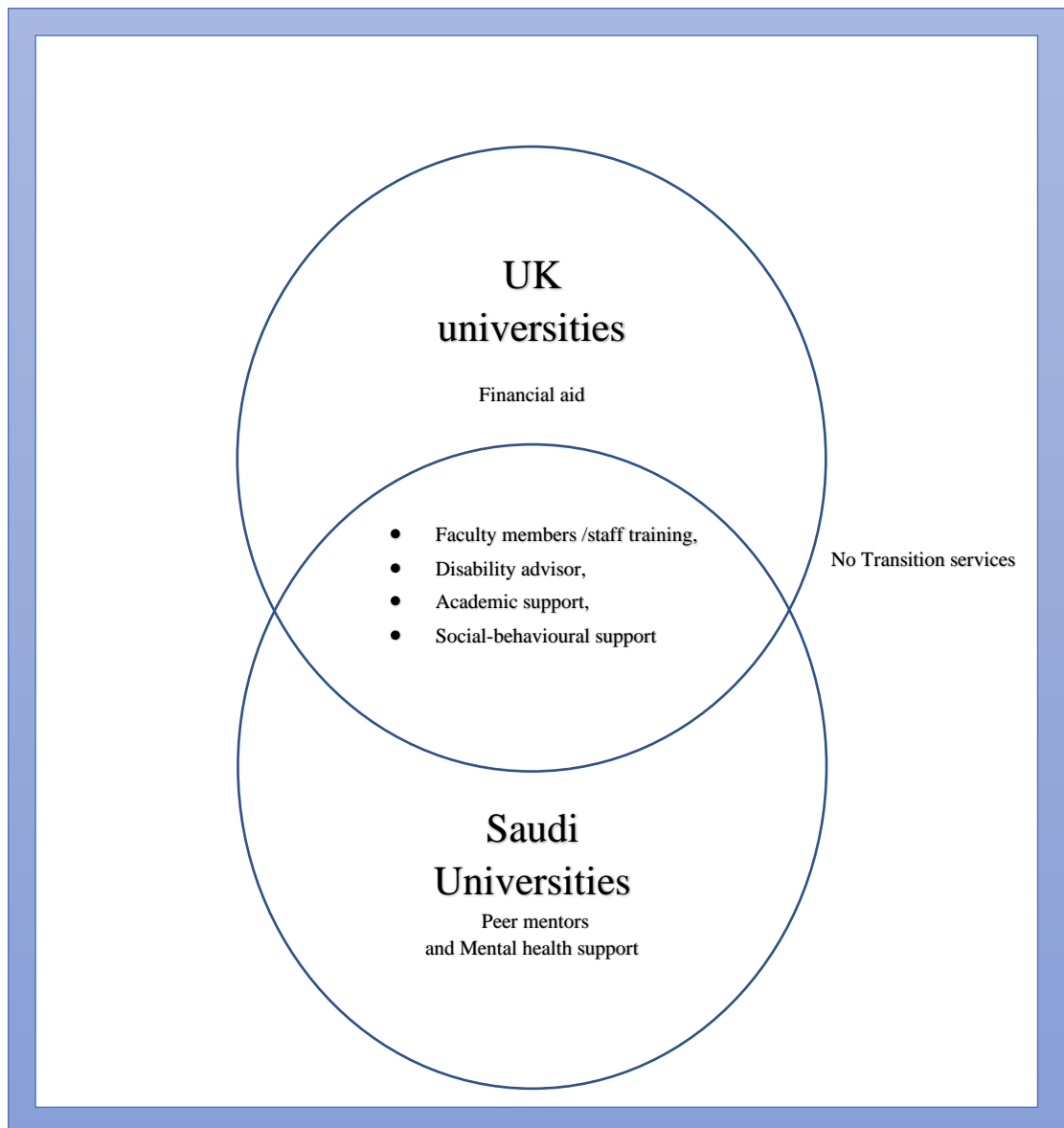
4.3.2. Data presentation for the thematic analysis for stage three

Thematic analysis was carried out to identify the influences that seemed to shape how disability services in general, and disability services for autistic students in particular, are organised in the four universities. The level of analysis focuses on the explicit meaning of what is being said by the data it examines, rather than going deeper with the analysis. The justification for this decision was given in the methodology chapter (Section 3.4.3. Thematic analysis used in stage two and three). A number of possible influences were identified, which can be organised for purposes of analysis under two main themes: external and internal influences (see figure 6).

4.3.2.1. Theme one: External influences

This theme is about influences that are apparently, and in some ways, external to the universities, including the country's culture, government and international policies and legislation, disability discourses and external bodies.

Sub-theme 1: Culture in relation to gender
This sub-theme is about the influence of the Saudi culture on the organisation of disability services. It specifically relates to the segregation between male and female individuals when providing services in society, which is a practice in SA and not in the UK. Segregated services in SA means that male and female individuals receive services in two different sections or buildings and are served by staff of the same gender.

KAU clearly showed that their disability services are segregated based on the students' gender by using the phrases *'female students with special needs'* and *'male students with special needs'*. The word *'female'* was used in 12 different places in their disability services' website text, and the word *'male'* was used 18 times. The information provided about disability services for male students was more in terms of text and detail than the information about female students' disability services. On the other hand, according to the website of KSU, they developed one guide for disability services for both male and female disabled students which means that the information provided for autistic students is the same regardless to their gender.

Sub-theme 2: Legislation and policy

Three of the four universities displayed an apparent understanding of a legal role towards disabled and autistic students by stating that the students' rights are protected by national and international policies and legislation which relate to the organisation of disability services.

KAU was the only university of the four that did not mention policies or any legislation that protects students' rights. The other Saudi university (KSU) stated that SA *'is a signatory to the United Nations Convention on the Rights of Persons with Disabilities'* and continued: *'This convention stipulates that accessibility is a human right'* (KSU, 2013:14). KSU also referred to Care for Disabled System 2000, a national law established by Royal Decree No. (M/37) of 11 December 2000, which aims to protect the rights of disabled students and to enable disabled students to benefit from their programmes in HE settings. In addition, according to the KSU document, this law also allows full participation of disabled students in terms of programmes and activities and guarantee full access to services.

In terms of the UK universities, two main laws were mentioned and may, therefore, influence the organisation of disability services: first, the Data Protection Act 1998 (National Archives, 1998) and, second, the Equality Act (2010) (Gov.UK, 2017). The Data Protection Act (1998), was 'An Act to make new provision for the regulation of the processing of information relating to individuals, including the obtaining, holding, use or disclosure of such information' (National Archives, 1998:1). According to the University of Kent (2014a), the Data Protection Act (1998) influences the use of student information: 'Information on student non-academic and academic performance is securely and systematically used to support a student's continuation on the course, within the requirements of the Data Protection Act 1998'. The Equality Act (2010), as described in the literature review, is anti-discriminatory legislation which aims to protect individuals with different characteristics, such as disability, from discrimination. Sheffield Hallam University (2015c) stated that the Equality Act 2010 encourages the disclosure of disability and emphasised that they wanted to meet their responsibilities towards disabled students and did not want these students to be disadvantaged: (Sheffield Hallam University, 2015d). Sheffield Hallam University (2015c) also stated that they were committed to non-discriminatory policies, and were committed to make *'reasonable adjustments'* by providing *'learning contracts and deliver[ing] specialist services to help ensure this'*.

Legislation and policy seem to shape the organisation of disability services in providing a framework for HEIs that can ensure the protection of the students' rights. In the UK, this framework includes the requirement for HEIs to make reasonable adjustments and ensures data protection. In SA, polices protect the students from discrimination and ensure academic and social participation. Legislation and policy, it seems, may empower disabled students because it protects their rights in HEIs. Referring to policy and legislation in the university's website information may have two purposes: informing disabled students about their rights and, also, displaying that the universities are aware of their position with regard to disabled students.

Sub-theme 3: External expertise

The apparent influence of external expertise was noticed in the website text of one Saudi university (KSU). The other Saudi and the two UK universities did not mention any relationship with external experts (organisations and/or individuals). For KSU, the external expertise is either international universities/associations or experts in the field. KSU (2013:14) stated that the document *'Students with Disability: Services, Policies and Procedures at King Saud University' 'was developed with the help of external experts in the field of special education'.* In addition, when developing disability support services, the university refers to the literature on special education, including studies by the Association on Higher Education and Disability and some international universities. Showing a relationship with external experts seems to show the willingness of the disability services providers to benefit from those external experts in terms of developing their disability services.

Sub-theme 4: Disability models

Sheffield Hallam University is the only university that explicitly stated that they organise their disability services based on a particular model, in this case the social model of disability. Models of disability (e.g. the social model and the medical model) are considered as external influences because they are concepts that exist outside of universities and are widely discussed in the literature. The disability services providers adopt these models in various ways, explicitly or implicitly and it is likely that these shape the organisation of disability services as they may underpin and influence the institutional philosophy. The other universities did not explicitly mention the disability models that influence their disability services. Adopting the social model of disability, as noted in the literature review, means that instead of seeing disability as a problem within the student, there is a focus on removing

barriers to access and learning. According to Sheffield Hallam University (2015c), the implementation of the social model of disability takes the following steps:

- *'Recognises that a person may be restricted or disadvantaged by their environment;*
- *Understands that these restrictions can, with appropriate action, be alleviated;*
- *Identifies any barriers and obstacles to learning and aims to remove them;*
- *Provides the support services, equipment and physical adaptations which remove such barriers and obstacles'.* (Sheffield Hallam University, 2015c)

In conclusion, these influences are external to the universities; however, it seems to shape the organisation of disability services in these Saudi and UK universities.

4.3.2.2. Theme two: Internal influences

This theme is about apparent influences that are internal to the university, which includes the university's strategic plan, organising disability services based on the type of disability or disability services teams, the institution's values and its inclusive practices.

Sub-theme 1: Strategic planning

An institution's strategic plan often includes its vision, mission and objectives. Vision can be defined as 'a desired future' (Mirvis *et al.,* 2010: 316) and 'should help the public have an idea of the culture of the organization' (Ozdem, 2011: 1889). In terms of an institution's mission, mission 'states what the organization wants to be and whom it serves' (Ozdem, 2011: 1888) and often includes 'a set of goals that help the organisation reach its aims' (Ozdem, 2011: 1889). Such goals or objectives represent 'the gap between the current status and a desired future state' (Hallinger and Heck, 2002: 17). These are what an institution would like to achieve and are narrow compared to the institutional vision and mission (Hallinger and Heck, 2002).

The findings of this research show that three of the four universities provided information on their websites regarding their strategic planning. Sheffield Hallam University did not give such information, which may be because they do not consider this information necessary for prospective or current students. Concerning the Saudi universities, KAU stated that their vision is to *'lead in providing all services for female students with special needs so that King Abdul Aziz University becomes a pioneer in special needs service'*, thus emphasising that

they aim to be leaders in supporting students with special needs and positioning themselves as pioneers in disability services. In terms of the University of Kent vision, they stated that they want to improve disability services continually. Also, similarly to KAU, they want to be a role model for other universities.

The missions of KAU and KSU are similar. KAU stated that their mission is to *'Facilitate access to all services that enable them [autistic students] to complete their education and become active members of society in all aspects'*. They also stated that they believe *'in the mission of providing the best possible services'*. KSU (2013:14) stated this mission: *'to offer full services to these students, as well as offering programmes and activities that help them develop and improve their skills to achieve their highest levels of excellence'*. It seems that these statements of mission guide the disability services providers and aim to lead to good disability support and services.

KAU displayed their objectives for their disability services. They stated that they aim to provide disability services and counselling and to enable access to sites on the university's campus. KSU did not mention their objectives to reach their mission and vision. However, they indicated that their vision is to provide specific services for disabled students in the university (KSU, 2013:14). The University of Kent gave detailed objectives for their disability services. Specifically, the objectives of the University of Kent (2014a) were:
- Ensuring the visibility of student support and ensuring that services are valued and understood;
-Raising the disabled students' awareness in regards to employability and careers services;
- Providing a secure and safe campus community and enhancing the university's life for all students;
- Fostering good relations with Kent alumni and the local community;
- Protecting the personal information of disabled students within the requirements of the Data Protection Act 1998;
- Promoting diversity and equality;
- Providing staff training.

According to Ozdem (2011), vision and mission statements should guide the activities of the institution. The findings of this section show diversity between the four universities regarding their strategic planning which shape the organisation of their disability services.

Sub-theme 2: Type of disability

Whilst types of disability are used to classify students with disabilities into categories, this is considered to be an internal influence because it seems that the disability services classified their services based on the students' type of disability. For example, some university websites contain different links with different titles based on the type of the student's disability.

Sheffield Hallam University and KSU seem to be influenced by type of disability in organising their disability services as both organised the information they provide to disabled students based on disability types. Their information is divided into these categories: ADHD, autism, hearing impairment, health and physical disabilities, mental health difficulties, learning difficulties and visual impairment. In addition, Sheffield Hallam University added the category of ADD, while KSU added communication disorders. These universities might classify students with disabilities into categories for the ease of providing disability services; however there is a risk of stereotyping students with disabilities.

Sub-theme 3: Disability services teams

The nature of disability services teams also seemed to influence the organisation of disability services. Disability services in one UK university (Sheffield Hallam University, 2015c) was divided into categories based on the name of the team for different services. For example, the advisory teams' role is to offer advice for disabled students with different types of disability. Sheffield Hallam University divided their disability services into four different teams: the Disabled Student Support team, Support Worker Team, Advisory Team and Sheffield Regional Assessment Centre. The students with autism access disability services based on these teams; for example, if the student needs a support worker he/she will contact the Support Worker Team which means that these teams shape the organisation of disability services.

Sub-theme 4: Values

Institutions that set out their values explicitly might aim to share what is significant to themselves as institutions. In addition, values can direct decision making. The University of Kent stated that they have five different values and these seem to influence and underpin the organisation of their disability services: empowerment, innovation, accountability, honesty,

student-focused services. Student-focused services were also mentioned by KSU and Sheffield Hallam University. The meaning of these five values will be explained. *Empowerment*, according to University of Kent, (2014a), means *'supporting and enabling students, making a strong contribution to their positive experience of Kent, celebrating their successes and preparing them for a successful life after graduation'* (University of Kent, 2014a). *Innovation* means encouraging *'all staff to be creative and take the initiative, suggesting ideas for improving…'* *'services and co-operating to implement them'*. (University of Kent, 2014a). *Accountability* means taking responsibility for behaviour and actions as providers of disability services. In terms of *honesty,* it means communication that is professional, honest and open with external contacts, students and colleagues. *Student-focused services* mean taking into account *'the student's desires and abilities'* (KSU, 2013:55), focusing on the student's individual needs (Sheffield Hallam University, 2015a) and providing *'student-focused support services'* (University of Kent, 2014a).

Empowerment and being student-focused can both be considered as values and, in addition, as inclusive concepts. The next section will present the findings related to the influence of inclusive concepts on the organisation of disability services.

Sub-theme 5: Inclusive concepts
The term 'inclusive concepts' was used by the researcher of this study to identify concepts that might signify inclusion in HE settings. The inclusive concepts that were identified as apparent influences that shaped the organisation of disability services were*: collaborative working, accessibility, equality, diversity and inclusivity.*

Collaborative working was mentioned by three universities. The University of Kent emphasised that they achieve the University of Kent vision by *'working in partnership with Kent Union, University staff in academic and service departments and external partners'* (University of Kent, 2014a). Both Saudi universities (KSU and KAU) indicated that they encourage collaborative work in order to meet the academic needs of disabled students. It is an inclusive concept because it engaged different parties in supporting students with disabilities. A*ccessibility* means making services at the university reachable for disabled students. This inclusive concept was mentioned by the University of Kent only (University of Kent, 2014a) and it means that the university ensures accessibility for services and facilities by everybody (students with and without disabilities). In regards to the influence of the

inclusive concept *equality*, it seems that this concept is related to UK universities only. For example, Sheffield Hallam University (2015c), indicated that *'the University is committed to inclusion and equal opportunities and welcomes applications from disabled students'*. The University of Kent pointed out that they work *'in partnership with Academic Schools, Professional Service Departments and Kent Union to develop and promote student equality'* (University of Kent, 2014a). This is an inclusive practice because it ensures that everyone is treated equally regardless of their extra needs.

The inclusive concept *diversity* was mentioned by the University of Kent only. It means implementing diversity procedures and policies and celebrating and respecting diversity (University of Kent, 2014a). Diversity means that the university celebrates and values differences which reflect on their disability services (e.g. in terms of providing different services for different group of students). Finally, the influence of the inclusive concept *'inclusivity'* was evident in all the Saudi and UK universities. It means full participation in services and activities (KSU, 2013:54; University of Kent, 2014a; Dean of Student Affairs, 2015 b), and it means promoting inclusive practices (Sheffield Hallam University, 2015c).

In conclusion, the thematic analysis used in this section was carried out in order to respond to the research question: What influences seem to shape how disability services are organised at SA and UK universities? The organization of disability services in the two SA universities is different to that in the two UK universities in terms of being influenced by culture in relation to gender and external expertise. On the other hand, the UK universities are different in that disability models and the type of disability services team are the influences on disability services in UK universities. In common, the two Saudi and two UK disability services seem to be shaped by five influences: legislation and policy, strategic planning, type of disability, values, and inclusive practices, although these may have different specific content. Finally, the thematic analysis shows that the organisation of disability services in the two Saudi and two UK universities seem to be influenced by internal influences more than external ones. However, this result should be considered with caution as this is not a representative sample.

Figure 6: The influences that seem to shape how disability services are organised at SA and UK universities

Culture in relation to gender

Disability models and discourses

Saudi universities

Legislation and policy
Strategic planning
Type of disability
Values
Inclusive concepts

UK universities

External expertise

Disability services and teams
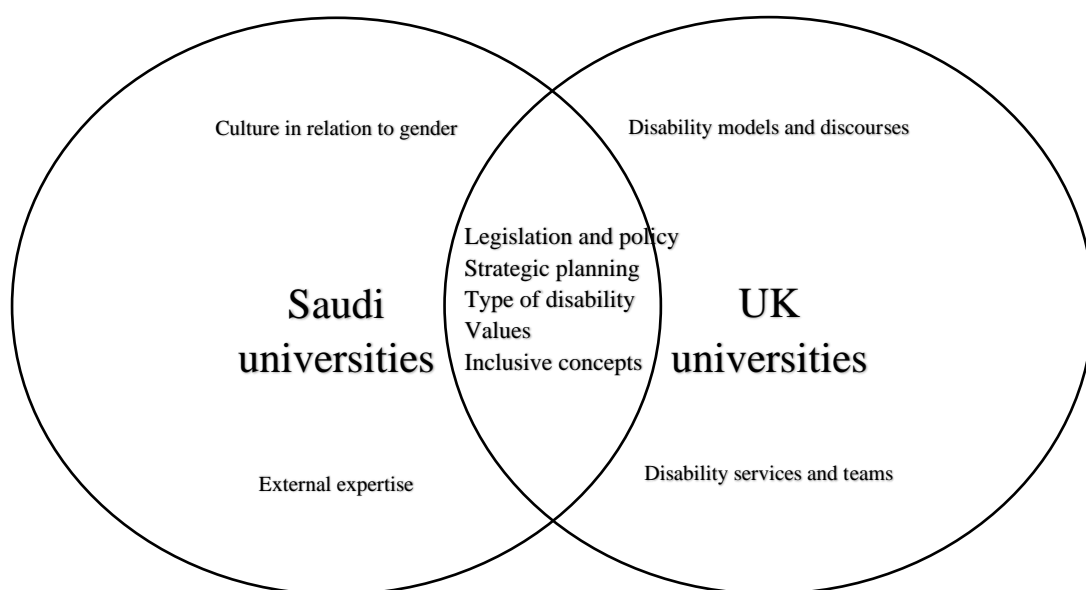
4.4. Chapter Summary

This chapter presented the findings of the document analysis (the content analysis, thematic analysis and discourse analysis). Many codes and themes emerged that responded to the research questions, and some of these codes and themes are significantly important in terms of their contribution to autism research and knowledge. The next chapter will focus on a discussion of what is revealed about disability services and how these services are communicated to autistic students in HEIs in the UK and SA through the medium of the university website.

CHAPTER 5: Discussion

5. Introduction

This chapter presents a discussion of the main findings organised according to some of the main themes which emerged from the data analysis in the previous chapter and in relation to the relevant themes which emerged from the literature review. There are three main themes related to autistic students: the language used to refer to these students; the debate regarding educational provision and placement for learners with autism; and autistic students' voices. In terms of themes related to disability services' websites, this chapter will discuss these websites in terms of their role and accessibility, the potential impact of disability services websites on students' decisions and choices, and the analytical models (expert disability services provider and flexible disability services provider).

5.1. The language used to refer to students on the autism spectrum

According to Harpur (2012:325), 'Language is a powerful tool in influencing how society and culture construct disabilities'. In addition, according to a young man with autism who writes about his own experiences (Moran, 2016:11), language has a long-term impact on people on the autism spectrum and 'on how they feel about themselves'. To my knowledge, this is the first study that examines how language is used in referring to autistic students on disability services' websites. Both person-first and identity-first language was apparent on the Saudi and UK universities' websites, and a wide variety of terms was used to refer to 'autism' as a condition, disorder and/or difference. The debates around the use of person-first language and identity-first language and the use of language to describe 'autism' are discussed below in relation to this study's findings and the wider literature.

In this research, there was inconsistency between and within disability services websites in terms of the use of language to refer to students on the autism spectrum and it is not clear who decides this use of language (disability services providers, students on the autism spectrum, webpage designers, or other university personnel). In addition, there was an absence of guidelines in the use of disability language on these websites and no justification

of the use of language to refer to autistic students. In this sense, the variety of usage identified on the websites thus seems to reflect the variance in the wider debate. In addition, in the UK universities in this study, a number of terms were used to refer to and describe autism, both between and within universities, for example: difference - *'autism spectrum differences'* (University of Leicester, 2017); disorder - *'autistic spectrum disorder'* (Newman University, 2017); and condition - *'Autism Spectrum Conditions'* (Nottingham Trent University, 2017)*, 'Autistic spectrum conditions'* (UCL, 2017). These terms signal different understandings of autism as will be discussed in this section.

As mentioned in the literature review, the debate around the use of person-first language (e.g. students with autism) and identity-first language (e.g. autistic students) is ongoing, and each group (people who adopt person-first language or identity-first language) has their own perspective on their adoption of one of these positions. In the UK, Ballan (2008:194) suggests, disabled people prefer identity-first language because they 'feel pride in referring to themselves as disabled persons'. On the other hand, Feldman *et al*. (2002) and Blaska (1993), argue that distinguishing the person before their disability and focusing on abilities rather than disabilities is more achievable by using person-first language. As Ballan (2008:194) points out, in person-first language, which she suggests is preferred in the USA, the 'emphasis is on the person first and the disability imposed by society second'. In addition, person-first language is considered to be a way of showing respect (West *et al*., 2015).

In terms of the media, use of different terminology may promote different images of people with disabilities. According to Gentry and Wiggins (2010:7), some labels used to define people with disabilities have 'extremely negative connotations and are simply misleading. Using inappropriate labels might contribute to negative stereotypes and devalue the person being described'. Thus, the International Labour Organization (2015) and the International Paralympic Committee (2014) have developed guidelines for people working in the media globally to provide practical advice on how to promote a positive image of individuals with disabilities. These guidelines suggest the use of person-first language (in this case, therefore, this implies the term 'students with autism'). On the other hand, the British Paralympic Association and England Athletics (2012), in guidelines provided for the media in reporting Paralympic Sport in 2012, indicated that in line with the Equality Act 2010, the term 'person or people with disabilities' should not be used, suggesting instead that the term 'disabled

person/people' (identity-first) is the correct term to refer to these individuals (in this case, therefore, this suggests the term 'autistic students').

There also seems to exist no agreement around terminology among the 'autism community' which includes different groups such as professionals, parents and adults with autism. For example, some adults with autism prefer person-first language and others prefer identity-first language (Moran, 2016; Robison, 2019). There therefore seems to be no single 'correct' or preferred way to refer to individuals on the autism spectrum. As Robison (2019: 1005) notes, in a commentary inspired by the discussion made by the International Society for Autism Research, the diversity of the use of autism terminology is 'as great as the diversity of the autism spectrum'. This puts the universities' webpage authors in a difficult position in terms of how they should refer to students on the autism spectrum.

Robison (2019) argues that adults on the autism spectrum (and, in the case of children, their parents) should have the last word in how they are addressed. This suggests that disability services' websites should adopt terminology that is preferred by the students on the autism spectrum. Moran (2016) indicates that the role of professionals - in the case of this research the provider of disability services - should be to make an effort to find out the student preference. Moran (2016:26) suggests: 'listen to each person you work with and let them guide you and help you in knowing how to refer to them. This will not only make them feel better around you but will also help you to form a good working relationship with them'. However, this is almost impossible as the university disability services websites are accessible to a wide range of visitors (potential students, current students, university staff and others) with different preferences for language use.

Terminology changes not only over time but also in different cultural contexts. In SA, both universities (KSU and KAU) might be signalling a perspective, consciously or unconsciously, when they refer to students, as a consequence of there being no official guidelines about the use of disability terminology in SA. In this context KAU and KSU reflect the use of both common ways to refer to these students according to the literature (person-first language and identity-first language). However, on 11th June 2019, King Salman urged all agencies to use person-first language, specifically to use the term 'people with disabilities' in all media statements and official communication. This is the first order by the King regarding the use of terminology (Arab News, 2019). The Ministry of Labour and

Social Development justified the adoption of person-first language by the Saudi government; they said 'the high number of terms used to describe people with disabilities and the use of local terms (e.g. children of autism) rather than international terminology meant communicating with non-Arabic speakers at international forums was confused' (Arab News, 2019). It is expected that the universities' websites, including disability services' websites in SA, will be affected by this order and the use of language will change, such that the institutions will consistently adopt person-first language when referring to disabled individuals.

Parents and professionals tweeted in response to the Saudi Press Agency's announcement regarding the royal order that all official communications in SA would adopt person-first language. According to Al-Shamare (2019), Twitter is a powerful tool for the parents of individuals with disabilities and is the most trusted platform in the field of special education in SA, in part as it provides up-to-date information related to the field of disability. In response to the royal order, a range of perceptions was evident on Twitter: some parents and individuals with disabilities stated that they preferred other terms such as 'people with special needs' and 'people of determination' which is a synonym of 'the determined ones', indicating that in different cultural contexts there are local variants that themselves reflect beliefs and preferred forms of address. Many parents and individuals with disabilities commented that changing the label would not change the poor state of disability services in the country and asked for their 'rights' and improved services. For example, one person, who was a wheelchair user, stated, 'Call us people with mobile chairs if you like. We ask for our rights'. A tweet from an unknown user pointed out that the perceptions of parents and individuals with disabilities were not considered before the announcement of the order to use person-first language to label individuals with disabilities in SA. Tweets from Saudi professionals specialising in disabilities, however, praised the royal order and described the label as accurate as it met international conventions. It seems that parents and individuals with disabilities were sceptical about the change and did not necessarily agree with it, whilst professionals seemed to support it. Also, it seems that the debate around disability terminology has raised the issue of lack of disability services and support; it appears that the terminology is considered less important at this time than the quality and extent of disability services. The Saudi royal order mentioned above seems to aim to shift the current usage of disability terminology within the Saudi community from the use of local terms to international versions.

Since autism was first recognised by parents and the media in SA in 1999, some parents, journalists and media outlets have referred to autism as an 'illness' and to those 'afflicted' with it as 'patients'; these terms have positioned autism within a medical domain. Alsharif (2019: 9) indicated that 'how the family understands the disability is a core element in dealing with the disability'. People tend to show greater empathy if a family has a sick child rather than a child with a disability, which is a lifelong condition. Alsharif (2019: 6) argues that the medical model of disability dominates Saudi society, and 'the majority in SA see people with disabilities as sick people who need to be cured out of sympathy'.

In terms of the impact of the Saudi royal order on the understanding of autism in SA, this order might not significantly affect the understanding of autism and the debate among parents, adults with autism and the community regarding the use of language to refer to individuals on the autism spectrum; however, it is expected that the order will shape professional practices in terms of compelling professionals to use person-first language in their official communication. It is expected that this debate in the country will be ongoing. The official use of a particular language, such as person-first language in the case of SA, might make a difference over time in terms of how parents and others regard autism and in moving it away from the medical domain. Similarly, since the 1980s in the USA, the Disability Rights Movement has been trying to shift the language from the use of the term 'handicapped' to the term 'people with a disability', which is people-first terminology (Haller *et al*., 2006). The shift in language use has consequences, such as with society's perceptions of disabled people. Society's perceptions of people with disability has changed positively along with practices (Haller *et al*., 2006).

Kenny *et al*.'s research (2015) noted that language used to describe autism has undergone considerable changes (Kenny *et al*., 2016). Changes have come from self-advocacy groups, parents and the medical and scientific communities as diagnostic criteria and understandings of the condition have evolved. This study produced similar findings to Kenny *et al.*'s study (2015), related to the inconsistency in terms used by disability services websites to refer to 'autism'; as noted above the UK universities disability services' websites seemed to show different understandings of autism, sometimes even within a single webpage.

According to Baron-Cohen (2017), the terms 'autism', 'autism spectrum disorder' and 'autism spectrum condition' are all synonyms and can be used interchangeably. This indicates that the websites that used the terms 'disorder' or 'condition' are using similar language. Therefore, the discussion here will be around viewing and portraying autism as a 'disorder' or as a 'difference'. According to Baron-Cohen (2017), the scientific and clinical understanding of autism is mostly disorder-focused. He argued, however, that autism is a difference rather than a disorder because, in terms of the biology of autism, on the neural level there is evidence that an 'autistic brain' does not have a disorder but rather a difference to the normal brain (e.g. he states that the amygdala is larger in an autistic child). There are also diverse views around 'disorder' and 'difference' between different models of disability. The medical model views autism as a deficit rather than a difference, the social model views autism as a social difference and urges for social inclusion (Kapp *et al*., 2013), the neurodiversity movement calls for more than social inclusion, valuing autism as a human diversity and a positive identity (Straus, 2013).

One way disability services might address the continuing debate around terminology is to explicitly state their use of language and justify this use for the visitors to their websites. Websites are accessible by a broad audience such as potential students, parents of these students, professionals in the field, and researchers. Kenny *et al*. (2016) call for context-specific terminology - in the case of this research, information related to the use of language and terminology on any specific university or disability services' website might be one way of making this language use visible. The variety of terms evident in the data suggests that it may be important for universities to make a conscious choice rather than an unconscious choice in regards to the choice of terminology.

5.2. Educational provision for learners with autism

This section discusses placement of, and provision for, learners with autism in the educational systems of SA and UK in the context of inclusion and the 'dilemma of difference'.

Students with autism are 'included' in HE in the UK and SA, in the sense of being known to attend HEIs, and this research has shown that provision in various ways, according to the universities' websites, seems to be made for these students. In 2012, KSU was the first Saudi

university to include a student with an official diagnosis of autism (see the case study in the introduction chapter). As previously noted in the introduction chapter, (Section 1.5.1. What is autism?) there is a lack of statistics regarding how many students with autism attend Saudi HEIs, and, of course, students with autism before or after this year may have attended this or other Saudi universities without disclosing their autism. It is known that the learners with autism who attend Saudi HE are those who have attended secondary general schools – which means they were fully included in the school system - and therefore have scored 51 or more on an IQ test. [Students with a lower intelligence quotient (IQ), with a score of 50 or less on an IQ test, often categorised as being severely to moderately disabled, receive 'habitation' in special centres and are not eligible to attend general schools, colleges or universities (Ministry of Labour and Social Development, 2018)]. In terms of decisions around placement at HE level in SA, these are based on student choice between colleges and universities. At this stage, students have more choices regarding educational placements compared to decisions about secondary school placement where the decisions are made by the school and parents (AL-Mousa, 2010; Tatweer, 2016).. There is a lack of peer-reviewed journal articles on educational placement and provision for students with autism in HE in SA; what is known is based on the few documents which are published on universities' websites regarding the support available for these students (e.g., KSU, 2013).

In the UK, similarly, decisions around placement at HE level are led by student choice. There was in the past a mistaken and widespread assumption that 'autism is likely to prohibit' autistic students to study in HE settings (Tolikas and Perepa, 2018:22). However, such an assumption has changed, particularly perhaps since HESA included students with autism as an independent category of disability in the UK HEIs in 2003, and statistics now show, as noted in the introduction chapter (Section 1.5.2. The number of disabled and autistic students in HE in SA and the UK), that many students with autism attend UK HEIs. Parsons *et al*. (2009), however, noted that, as in the SA context, there is a dearth of research about educational provision for students with autism in higher/further education, and the educational provision for these learners is an ongoing area of research.

Students in both countries might apply to an HEI without disclosing their disabilities; students at this level of education make their own choices. It is interesting to consider whether disclosure helps promote inclusion as it may enable suitable provision, or whether disclosure discourages inclusion by singling students out (this will be discussed further below

in the context of the dilemma of difference). The findings of this research, however, show that universities' websites frequently use an encouraging tone in their texts to urge autistic students to disclose their disabilities and thus access disability services. Such encouragement and support can influence a student's decision. This will be discussed further in section 5.5. (The potential impact of disability services websites on students' decisions and choices).

Developing transition services is also considered important to facilitate the inclusion of students with autism (Adreon and Durocher, 2007; Masterson and Meeks, 2014). This research found in stage two that transition services were mentioned as information for students with autism in the UK, though not in SA. The transition services in the UK disability services websites took many forms, such as early move to university accommodation, tour inside and outside the campus, and meeting the leaders of the academic course. From the perspective of students with autism, for example, in Van Hees *et al.*'s study (2015), students emphasised the importance of transition services where the student is familiarised with the new environment and the expectations are clarified for them in advance. The university website may be the key medium through which information about this transition will be first encountered.

In this research, from the examination of website texts in stage two, it appeared that, in both Saudi universities and in the sample of UK universities, students with autism attended the same classes as their peers while also receiving or having the option of support from disability services. This suggests that the educational placement for the students on the autism spectrum in the Saudi and UK universities seems to reflect the concept of inclusion/mainstreaming in both countries where the students with autism receive their education alongside their peers. However, this research did not examine real-life practices, which might vary from the information available on university websites.

Stage one of this research focused on determining whether provisions at universities took the form of autism-specific services, or whether they were generic disability services. Similar to Smith (2007), and according to the descriptions of such support on the universities' websites, this study found that most of the disability services were generic. This seems to mirror the concept of inclusion in the UK and SA because generic services implies that students with autism are not different from other students with other disabilities in terms of their needs and have similarities to students without disabilities in terms of their need for support.

So far I have shown how the debate about inclusion, often associated with mainstream education, has been taken up on the HE websites with an emphasis on disclosure and transition services and its relation to prompting inclusion, disability provision and generic support. Although this research found that most universities seem to offer generic support, examples of specific support also existed, for example academic services specific to autistic students. However, it has also been argued that autistic students need autism-specific provisions in higher/further education settings. According to some researchers (e.g. Smith, 2007) evidence-based support for autistic students at universities includes help adapting to the environment, support with residential life, social skills support, peer mentors, mental-health support, faculty/staff support and academic advisor support. Some studies have found the need for different services for autistic students at the UK universities such as help in meeting emotional needs and access to diagnostic assessment clinics (Taylor and Knott, 2007). However, according to Martin (2008), there are some barriers to accessing disability services in UK universities; first, some students are denied support because they do not have an official diagnosis of autism. These students might prefer not to disclose their disabilities for different reasons, or they might not have a formal diagnosis when they start their study. In addition, some students may believe in the neurodiversity movement which does not consider labelling necessary (Tolikas and Perepa, 2018).

Some researchers (VanBergeijk, Kiln and Volkmar, 2008; Masterson and Meeks, 2014) have suggested that HEIs with autism-specific provisions are more likely to attract autistic students than other universities. Indeed, according to Kundu *et al*. (2003), the availability and accessibility of support services for students with specific disabilities such as autism plays a fundamental role in attracting prospective students with such a disability. This might explain why the Saudi and UK universities in this study which offered autism-specific services shared information regarding autism-specific support. In stage 2 of this research, 13 UK universities and two Saudi universities that had developed autism-specific provisions were studied in depth and it was found that some universities used different tones to, perhaps, attract current and prospective students to access their services. For example, they used advertising and encouragement (Section 5.5. in this chapter details the potential impact of the tone adopted by disability services websites on students with autism)**.**

According to previous studies (Taylor and Knott, 2007; Masterson and Meeks, 2014), offering autism-specific provisions is a good practice in higher/further education institutions. However, the findings in this current study indicate that only 22% of UK universities. 33 of 153, had developed clear autism-specific provision, as presented on their websites. This may be because autism services are less developed in HE settings in the UK, or it might mean that universities in the UK do not offer autism-specific provisions due to an emphasis on inclusive practices whereby they personalise disability support rather than providing separate services for students with autism. Alternatively, the lack of communication about autism-specific and generic disability services on websites might reflect the absence of a universally accepted way of providing services for autistic students. According to Zeedyk *et al.* (2014), limited research has been undertaken to explore support and services for autistic individuals in adulthood.

The 'dilemma of difference' is visible here in the tension between providing autism-specific provision for students on the autism spectrum or providing generic support. According to Norwich (2013) and Terzi (2005), this 'dilemma of difference' is a specific type of tension that is central to the inclusion of disabled students, including students on the autism spectrum. On the one hand, it is argued, difference must be noted in order to make specific provision, for example, categorising and labelling students with disabilities, but such labelling may not be positive, for example, leading to stigmatisation. On the other hand, if difference is not noted and generic provision made there is a risk that individuals' needs are not responded to. There is not therefore a positive and a negative response; each option presents its own advantages and disadvantages, hence a dilemma. Most universities' websites suggested that they tended to offer generic disability services, running the risk that they do not meet the individual needs of autistic students and do not consider differences between students, but, perhaps instead, they may be enabling these students to be viewed and considered as no different to other students. Where they do offer autism-specific services, this may mean that students have individualised support, but they may be required to 'prove' their autism.

According to the findings of this research, some disability service providers seem to encourage diagnosis and disclosure, as noted earlier, and some appear not to give attention to the importance of diagnosis, for example, by claiming to offer disability support for undiagnosed students. Sometimes, an autism diagnosis is a gateway to support students,

while others argue against it, seeing it as a way to stereotype students and deny services – yet again, this illustrates the dilemma of difference. Providing a diagnosis may also be associated with other issues, such as low expectations of students with labels (Farrell, 2001; Ravet, 2011). Historically, students have been labelled based on their disabilities in the UK to help others understand the nature of their disability so that specific support could be provided. Autism-specific provisions, however, are not free of drawbacks. For example, Madriaga (2010) indicated that although some UK universities tend to offer specific academic adjustment (e.g. mentors and provision of assistive technology) such adjustment might isolate students with autism from their peers and thereby increase their social isolation and social anxiety. Lewis and Norwich (2005) and Norwich and Lewis (2007) found that the notion of specialist, category-based pedagogies for students with disabilities in schools was not generally supportable. Instead, they called for services that are based on the needs of the individual learners (a person-centred approach). According to the findings of this research, some universities, such as UCL (2017), seem to consider the needs of the students in the centre of the services provided which they state means the services are designed and delivered to meet the unique needs of each student with autism. This is often known as person-centred practice (Hurewitz and Berger, 2008). Van Hees *et al.* (2015), in a study of the experience of 23 students at a university in Belgium, found that students preferred comprehensive, personalised and individualised support. Smith (2007) also suggested that disability-service providers operate on a case-by-case basis when providing services for autistic students in order to meet individual needs. One problem with categorising and providing disability-specific support instead of generic support is that it reflects the medical model of disability which depicts the problem as within the individual (Norwich, 2002; Farrell, 2001). This then may lead to low expectations of what a student with a disability might achieve. In addition, labelling tends to lead to assumptions among professionals and parents that certain categories of disabilities require certain provisions; however, there is little evidence to support this claim (Farrell, 2001). The category-based system to describe students with disabilities has advantages, and it is expected that categorising will continue to be used as it is similar to other aspect of our lives (e.g., ethnic and racial groups). Some advantages of providing disability-specific provisions based on labels are that it gives an overall impression of the effect of the disability on the student and it helps people in understanding the causes of the student's problems, possible outcomes, and available support (Farrell, 2001).

To sum up, the inclusion of students with autism in HE settings, as indicated in this research via disability services' websites, seems to some extent to reflect wider debates around inclusion in HE and illustrates the dilemma of difference. Provision of autism-specific versus generic disability services and issues around of diagnosis and labelling are examples of this.

5.3. Listening to the students' voice

An interesting finding of this research is that some UK universities used the voice of students with autism on their websites in order to communicate different messages while the Saudi universities' websites did not include the voice or experience of autistic students. This section discusses how universities present disabled students' voice on their websites and the type of messages that seemed to be communicated by the existence or absence of students' voice. It was noted that, in most conducted research, researchers tend to gain insight into students' perspectives whereas disability services websites try to communicate different messages through the use of students' voices such as advertising their services and showing current students' experiences to prospective students.

Before, discussing the hearing of students' voice in the UK universities, it was found that the Saudi universities and some UK universities seem to take a disempowering approach when talking about their disability services on their websites. This can position students with autism as receivers of disability services rather than as partners in developing and delivering disability support, which the researcher of this study calls an 'expert provider' approach to providing disability services (See section 4.2.1.5 'Expert disability provider' and 'flexible disability provider'). The term refers to their self-positioning rather than a judgement as to their expertise. It is significant in terms of the way the website communicates with autistic students and how they, as the provider and the student as receiver of services, are positioned. The potential impact of positioning students with autism as receivers of support may send a message that the universities do not consider the voices of autistic students, which means that there is a link between the use of a certain tone and the existence of the students' voice. There are, perhaps, issues regarding rights and empowerment in such an absence of students' voices on these websites. For example, Milton *et al*. (2014), in their study *Ethics and Autism* which is a commentary on Post *et al*.'s (2013) study, Milton *et al*. (2014) were concerned with hearing the voices of individuals with autism. They indicated that they 'believe that human dignity requires us to make every effort to access the views and perspectives of autistic

people'. In addition, they stated that 'the absence of any sustained attempt to represent the views of autistic individuals themselves reflects a paternalistic approach to the ethics of care and threatens [the] further disempowering [of] those already frequently overlooked in key decision-making processes that shape their lives' (Milton *et al.*, 2014: 2650). Legislation is important to encourage the consideration of students' voices regarding the provision of services and in the conducting of disability research. For example, international policy legislation has made obtaining the views of individuals with disabilities a requirement in decision making (U.N., 2006) and Milton and Bracher (2013) have argued that autistic people have the right to be involved in research and the production of knowledge on autism. However, they suggest that research concerning people with disabilities and policies sometimes fails to include them 'in a meaningful way in agenda setting in both research and service provision' (Milton and Bracher, 2013: 63). Post *et al.* (2013) indicated that the voices of individuals with autism should always be heard and supported, and there should not be 'top-down imposition of professional expertise but rather bottom-up grass roots attention to the voices of affected individuals' (Post *et al.*, 2013: 1473).

Autistic people's voice is as important as the voice of the service providers and parents. However, in terms of the voice of autistic students in the Saudi universities studied, it appears that their voices are less reported and documented. According to Madi (2014), most of the research on disabilities, including autism, in the SA context has been underpinned by the medical model of disability, which pays less attention to the lived experiences of the people who are affected by the disability. This might be one reason why there may be no use of students' voice on the Saudi universities' disability services websites. In addition, a search of the literature revealed that no research has been conducted on the lived experience of individuals, including students, with autism in SA. It seems that autism research in SA focuses on teachers' (e.g. Haimour and Obaidat, 2013) and parents' voices (e.g. Almansour *et al.*, 2013) rather than on that of the individual who is affected by autism. This means that, in the Saudi context, there is a lack of diversity of perceptions within the autism community as well as a lack of participatory research, which is 'research involving a partnership between academic researchers and people affected by the matter under investigation, where the latter share decision-making with the academics' (Chown *et al.*, 2018:3), in other words, research that is conducted *with* people rather than *on* them.

The influence of autism on the daily lives of individuals in the UK is more documented and researched than it is in SA. For example, the voices of individuals with autism in England are well documented; the National Autistic Society, a well-recognised association in the UK, published the 'I Exist' report (NAS, 2018), which contains an analysis of the perceptions of 1,400 adults with autism and their caregivers in England. In total, 40% of the participants were caregivers or parents who had completed the survey on behalf of someone with autism; 18% were adults with autism who completed the survey with support from others; and 42% were adults with autism who completed it by themselves. This detailed report reflects the needs of individuals with autism by using their comments and views. For example, it found that 82% of adults with autism said that, if more support was provided, they would feel less isolated, while 70% reported that, with more support, they would be more independent. In addition, the report found that adults with autism do not have a decent quality of life due to a lack of health and emotional support. In addition, there is a lack of choice and control; they experience discrimination; and they are not given equal employment opportunities, which negatively affects their economic well-being. Notably, none of the comments that were provided in this report were positive regarding autism support and services in England.

The current research has another important finding. It was found that user comments were limited to those that were positive to support claims regarding the effectiveness of disability support; it was a way to advertise support and reassure and encourage prospective students on the autism spectrum to access disability services at the university by sharing more personal experiences from other students. In the current research, some UK universities indicated that they considered student feedback before establishing and providing support. However, they neither showed any negative feedback from students on their websites nor discussed how they addressed any concerns. It is important to consider that bias might exist in reporting such feedback by universities who prioritise projecting a positive image of their support. For example, Bath Spa University included a student quote to show the positive experiences of autistic students at the university in terms of have a support worker. The student's comment was about how helpful the support worker was for him or her (Bath Spa University, 2017). As mentioned in the findings chapter, listening to students' voices seems to indicate that providers of disability services adopt a flexible approach by adapting their services according to what they perceive as the students' concerns; however, the universities' use of students' comments seems more aimed at serving as advertising support.

In addition, in the current research, student and parent comments were used to indicate the effectiveness of four different disability services (support worker, transition services, mentoring and support with social skills). Similarly, part of Gurbuz et al.'s (2019) study showed that 26 autistic students who completed an online survey at a UK university received the following support from their universities: mentoring (six students) and study tutors (two students). In terms of its effectiveness, support was sometimes not effective in terms of meeting the students' needs. For example, a comment was made by a student with autism that indicated that support was not for his/ her individual needs (Gurbuz et al., 2019). Therefore, Gurbuz et al. (2019:628) stated that, 'A personalized support system would be more beneficial to track individual needs and intervene accordingly'. According to the findings of this research, and as noted earlier in section 5.2 (Educational provision for learners with autism), some UK universities seem to adopt person-centred support in order to meet the unique needs of each student with autism by indicating that each student will be treated as an individual and their needs as unique.

There have been some studies in the Saudi context that focus on examining the nature of disability services that are provided for students with disabilities other than autism from these students' points of view. These have focused on visual impairment, hearing impairment and physical disabilities, which may be because these are disabilities that have been recognised and included in Saudi society for a long time, compared to disabilities such as autism which have only been recognised relatively recently (in 1999) as indicated in Chapter One (Al-Fahad, 2010). For example, Al-Duwaish (2011) and Alkhashrami (2011) studied the nature of disability services that are provided for students at Saudi universities from the perspectives of students with a hearing impairment, a visual impairment and/or a physical disability. Although they conducted different studies, they found very similar results in different HE settings. Al-Duwaish (2011) and Alkhashrami (2011) found that these students reported the need for the following: ease of mobility on campus; trained staff who work with them; and an office or centre where disability services are easily accessible. The reported needs in this study obviously reflect the nature of the participants' disabilities (hearing impairment, visual impairment and physical disabilities) and do not necessarily reflect the perception of students with hidden disabilities, such as autism. This means that there is a specific gap in research in terms of the perceptions of students with autism in HE settings in SA.

Listening to and considering the lived experiences of students in HE is evident in the UK (e.g. Madriaga, 2010; Barnhill, 2016). One aspect is trying to understand how autistic students perceive the services offered. For example, Tolikas and Perepa (2018) aimed to provide a voice for 15 students with autism in one HE setting in the UK via a questionnaire. They found that all students reported awareness of the disability services that were provided by the university, and they considered the providers helpful in making the university accessible. Similarly, in a study conducted by Gurbuz *et al*. (2019), which aimed to offer information on university student support services, it was found that most students reported receiving professional support. One student claimed to use the university's website to access the contact details of the disability services. This student indicated that he/she emailed the team 'with minor concerns about what to do and how to do it' (Tolikas and Perepa, 2018:28). The disability support team then guided the student through the process and helped him/her with any queries and the DSA application. Another student with autism highlighted that it is important that information on accessibility is made available during the university's open days and induction week. For example, one student stated the following: 'When I was attending the university to visit and look around, I could not find it, and it was not obvious or clear where the support was . . . I would not say it was easy as I feel the support was hidden'. This student's comment might be a sign that disability services' websites are not always visible and/or that disability services' providers have to make more effort regarding making themselves visible for autistic students in real-world settings. Section 5.4. will discuss the visibility of disability services on the universities' websites further and in more detail.

In conclusion, it would seem that listening to students with autism in HE settings can help give them a voice within these settings and society. The findings of this research showed that university websites in the UK or SA do not generally include autistic students' perceptions and experiences; rather, in the UK at least, they have used comments from students and parents to either advertise their support or to encourage access to disability services. These findings seem to confirm that 'the experiences and needs of autistic adults are often poorly understood by service providers, and the experiences of [such] adults are under-researched' (Milton and Bracher, 2013:63).

5.4. Website accessibility and accessibility characteristics

The web is important for people with disabilities because it enables them to access information and services (Harper and Yesilada, 2008). For students with disabilities, specifically autism, the focus of this thesis, the university website is also likely to be their first encounter with the way the university views them and responds to their needs. There is an assumption among some people who are unfamiliar with cognitive disabilities such as autism that individuals with these disabilities cannot use computers to access the web (Harper and Yesilada, 2008). However, the accessibility of university websites for individuals with disabilities is a developed area of practice and research (as discussed in the literature review chapter in section 2.6.4. Web accessibility). For example, the World Wide Web Consortium (W3C) developed accessibility standards for the web which aim to help designers of websites in developing accessible websites for all individuals including people with disabilities (W3C, 2008; Kuzma, 2010). Part of this research focused on studying the visibility and navigability of disability services websites. Thus, this section will discuss websites' general accessibility and specific accessibility for individuals with autism. Then it will discuss two elements of university website design identified by this research and the literature as signs of an accessible website (Gori and Witten, 2005)

Web guidelines are intended to provide website designers with information about how to design an accessible website and evaluate the accessibility of already-designed websites. Recently, in the UK, on 23 September 2018, Accessibility Regulations came into effect for public sector websites, including university websites and mobile applications; they must become accessible in line with a statutory timetable (Accessibility Regulations, 2018). No local or international regulations or guidelines at the time of writing apply to the Saudi universities. According to a web developer, websites designers in SA focus 'on different issues such as aesthetic and security of the website' and little 'attention has been paid to accessibility issues' (Alayed, 2018:85).

In terms of websites' accessibility for autistic students, according to Seeman and Lewis (2019), people with cognitive disabilities such as autism spectrum disorder (ASD) and learning impairments are arguably not well supported by current web accessibility efforts. Britto and Pizzolato (2016) state that not all designers and developers have experience in accessibility, and, when they have it, it is often experience in making websites accessible for

people with visual impairments. Britto and Pizzolato (2016) developed web accessibility guidelines for individuals with autism to help designers and developers of websites in making websites accessible for these individuals. According to Britto and Pizzolato (2016), a manageable amount of information and number of links contribute to a good user experience for individuals with autism. They also recommend sequential and simplified navigation between pages and enabling the user 'to be in control of the navigation flow' (Britto and Pizzolato, 2016:141). For example, every page must have navigation buttons such as help, back to home, and exit. Also, they suggest, the user must be in control of the 'time to perform a task' (Britto and Pizzolato, 2016:142).

This study examined the navigability of university disability services websites. Along with the element of visibility, these two characteristics provide an insight into the level of accessibility provided by the university websites in SA and UK. The characteristics of visibility and navigability were discussed in detail in the methodology chapter (section 3.8.1.2) and will be discussed further in this section. According to the findings of this research, half of the studied disability services websites and most of the UK websites (78%) were highly visible on the search engine Google, and the other 50% were moderately visible. Hill (1996) suggested that the existence and visibility of disability services are important in the transition from secondary school to HE, because students can access necessary information before arriving at university. Increasing the visibility of disability services websites in search engine results – Google in the case of this research – would seem to be important because it makes the website easy to find for the prospective audience. According to Gori and Witten (2005:115), 'all the content of the Web is readily available – in principle. But the dominant mode of access is through search engines, and—in practice—the view they offer is restricted'. Web page visibility is 'perceived through the lens provided by search engines'. (Gori and Witten, 2005:115). Therefore, the role of websites, including disability services websites for universities, is to promote their visibility on the web in order to reach stakeholders, such as prospective students, funding bodies, and peer institutions.

Aminpour *et al*. (2009) indicate that creating content in English can significantly improve web visibility. Further, Lee and Park (2012) found that universities from non-English speaking countries showed lower web visibility than their English-speaking counterparts, which implies that content in the English language will positively impact the visibility of disability services websites. This might explain why half of the Saudi universities studied

were moderately visible, rather than highly visible, because the content of the websites included texts in Arabic language.

The other important element of website accessibility is navigability of the websites and this element was studied in this research. This research found that only 18% of UK universities are low in terms of this element and the rest of the UK universities have either excellent or average navigation. In terms of the Saudi universities, none of the studied universities were low in the navigation element. The findings indicate that most of the studied universities consider navigation of disability websites when designing these websites, which is an important element of a website's accessibility. As mentioned in the methodology chapter (see section 3.8.1.2 Implementation of stage one: usability and content analysis), the researcher of this study used certain criteria in order to identify the navigability of disability services websites, for example, the low navigability websites have dead links and errors in the webpages. According to literature such as Tarafdar and Zhang (2005) and Britto and Pizzolato (2016), considering navigation in designing websites means the content is simplified, the information is accessible and the webpages are consistent. Although this study did not study the navigability of disability services websites in-depth, it shed light on the importance of further research and studies in this area.

In summary, students with autism are expected to access university websites, including disability services websites. Thus, universities might wish to consider taking steps to develop or adopt guidelines that best enable these students to access their websites. This research highlighted an important characteristic of accessible websites: visibility and navigability. In general, based on the criteria set by the research, both Saudi and UK disability services websites seem visible and navigable. The next section discusses the potential impact of the tone adopted by the disability services websites on students with autism.

5.5. The potential impact of disability services websites on students' decisions and choices

Communication via websites is a dynamic and interactive process. Disability services providers use websites as a platform to share information about services with visitors including prospective students, current students, parents, professionals and researchers, all of whom have different backgrounds and understandings of disability services, which results in

different interpretations of the content of disability services websites. Communication is an interactive process and the users of these websites have multiple perspectives and understandings of websites. Disability services providers consciously or unconsciously make meaning and communicate this meaning via disability services websites. The construction of meaning is a complicated process – as mentioned in Section 3.1. 'Conceptual framework: Communication theory' – because meaning is created in the interaction between the sender of the message and the receiver. Visitors to disability services websites interact with the text, message, symbols, videos and sounds they contain, all of which influence communication and how meaning is created and interpreted. The frequently multimodal nature of webpages creates a context that may be difficult to identify or that may be interpreted differently by each visitor. According to Swan (2017:11), 'semiotic resources do not have fixed meaning but provide meaning potential that can be activated'. The analytical models identified in the findings chapter section 4.2.1.5 - 'expert disability provider' and 'flexible disability provider'– are both examples of how meaning can be activated and communicated. For example, expert providers tend to provide fixed meaning by using an imperative tone, whereas flexible providers use an uncertain tone when communicating with autistic students.

In addition, the findings of this research show that there were different tones within the Saudi and UK universities' websites, perhaps in order to generate certain responses from visitors to the websites. The use of different tones seemed to aim to influence autistic students' decisions in regard to disclosure and accessing disability services. In addition, the tones of the texts seemed to recognise the difficulties that autistic students may face in HE settings and make promises in regards to the development of disability services. Furthermore, one disability services website used a tone linked to the country's culture, while the imperative tone was used by the two Saudi universities for a possible purpose explained in this section.

In terms of the UK universities, this research found that they used encouraging, welcoming and advisory tones in order to emphasise how access to disability services often helps students affected by autism. In the UK, according to Chown *et al*. (2018), who studied 99 out of 160 UK universities, the number of students with autism is increasing. For example, at the University of Cambridge, students identified as having Asperger syndrome 'increased by 219% over the five years to 2012/13' (Chown *et al*., 2018:838). This means that UK universities now have experience in supporting students with autism. Most of the UK universities have pre-arrival support for transition services for these students (Chown *et al*.,

2018:838), and other services have also been developed to meet the needs of autistic students in UK HEIs. This is discussed in more detail above (section 5.2 on the educational provision for learners with autism).

The use of empathetic and uncertain tones by some UK universities seems to show understanding and recognition of the difficulties and challenges students might face during the transition to university (e.g. anxiety about finding their way around in a large institution). An empathetic tone was also used regarding the challenges that students might face once they begin university (e.g. adjusting to new routines and environments, meeting new people, managing studies independently and coping with student life). Autism affects the lives of individual students in different ways, depending on the severity of the condition and the extent of the support provided by their family and community. These are problems rooted in the characteristics of autism, but some problems originate with institutions.

Students with autism in SA have a different experience in regard to accessing HE. In SA, not many students with autism attend HE; the reason for this is unknown. The picture in SA therefore is of an emerging set of practices and so the issue in this context may be one of adopting practices from elsewhere while locating these within a different cultural context. However, it seems that one of the Saudi universities studied is consistent with the Saudi culture in its use of a segregation tone when talking about the services provided by the disability services. Also, both Saudi universities used the imperative tone in order to give guidance and instructions to students. This was associated with the absence of students' voice, which sounded like a one way communication – the university gives instructions and the students are expected to follow such instructions. In addition, one university seemed to make promises linked to its vision and future intentions. This might be an indication that the university encourages the users of their disability services to look to the future for greater development of the disability services. In this way, this promising tone also seems to indicate that the providers of disability services are ambitious and look for development and improvement of the currently provided support.

In terms of disclosing an autism diagnosis, some universities in this study assumed that autistic students might not disclose their disabiliy due to a reluctance to ask for and access services and support; therefore, they used encouraging and advisory tones to urge autistic students to disclose such information. One reason for avoiding disclosure among university

students with disabilities is the feeling that they no longer have a disability and that they are progressing well (Newman and Madaus, 2015). Another common reason is that some students might fear being viewed as less capable than other students without disabilities. In addition, many want to avoid the stigma that is associated with disabilities (Grimes *et al.*, 2019).

Disclosing a disability and accessing support, however, are frequently linked to each other. Although disclosure of disability is voluntary in SA and UK HE settings (as mentioned in the literature review section 2.5.4. Disclosure of disability), in order to meet their legal responsibility towards these students, the universities' websites used encouraging and advisory tones to urge the autistic students to disclose their disabilities. Sometimes, without disclosure, the students would not be able to access the needed disability services, and this might lead to problems and even crises for the students affected by autism.

In summary, communication is a complex process and might aim to generate different responses from the visitors of the disability services websites. For example, the tones used by the disability services websites aimed to demonstrate understanding of the difficulties faced by autistic students by showing empathy and seeming to be connected to the needs of these students. It seems that these universities tried to motivate autistic students to disclose their disabilities and access the disability services out of a concern for the best interests of these students. In addition, there was use of a tone that is linked to the culture (segregation tone) and other tones that are linked to the accessibility of disability services, such as the imperative and the promising tones. The issue of tone may be key to how the website is perceived.

5.6 Analytical models (Expert disability services provider and flexible disability services provider)

This study has identified novel analytical models that exemplify the apparent positioning of universities in terms of their provision of disability services according to their websites: 'expert disability provider' and 'flexible disability provider' as mentioned in detail in Chapter

4, section 4.2.1.5. Each type of service provision has seven main characteristics, which are summarized in Figure 7.

Figure 7:A summary of the characteristics of 'expert provider' and 'flexible provider' disability services.

E

Expert provider characteristics

- The provider's voice is the only voice that appears in the text.
- Less likely to collaborate with others
- Likely to disempower students
- Shows understanding of autism
- Shows understanding of the impact of autism
- Shows understanding of needs
- Uses advisory, empathetic, imperative and encouraging tones

F

Flexible provider characteristics

- Gives students a voice
- Collaborates with others
- Likely to empower students
- Uses a person-centred approach
- Considers each student to be unique
- Services available for both diagnosed and undiagnosed students
- Uses an uncertain tone

Figure

These characteristics make a theoretical contribution to knowledge about the presentation of disability services in universities and perhaps, therefore, about the actual provision in practice, the latter of which would need to be developed further in future research. In this research, it was found that the message conveyed by 'expert provider' services, which do not seem to give students a voice and do not seem to collaborate with others, is that the disability services providers are the experts in providing disability services. In this model, there is little apparent willingness to consider the perspectives of others which may be a way for 'expert providers' to demonstrate and share their expertise in understanding autism, its impact on students, and the different needs of students with autism. The expert providers seem to be in control of the information shared on the websites because their own voice is what is apparent and there was an absent of the voices of others, such as other experts, current students and

parents. A potential disadvantage of the 'expert approach' is that it can disempower students on the autism spectrum because it does not consider their voice important in influencing decisions of the disability services providers.

Universities that state that they listen to students' voices and collaborate with others present the message that they are flexible in terms of how they deliver their support to students with autism, and they value the involvement of others in developing their disability services. Universities that adopt a flexible approach view others, including students with autism, as individuals who can add value and contribute to disability services. This would seem to be an empowering approach; however, a possible disadvantage of the 'flexible approach' is that not all students with autism are aware of their own needs, and some of them may look to providers whose experience and understanding of autism they can depend on. Although flexible providers of disability services aim to empower others, including students on the autism spectrum, this approach might be discouraging for some students who need and/or prefer guidance from providers with expertise.

In practice, one possible significance of the distinction between 'flexible' and 'expert' providers is the way these might influence students' choice of a university. 'Expert providers' can be seen as providing 'expert' guidance and advice on issues that can be difficult for autistic students. This is one possible advantage of adopting the 'expert provider' approach. In addition, students on the autism spectrum may look at 'expert providers' of disability services as providers who understand their needs because these providers appear to show empathy towards these students. Further, in practice, the use of a more uncertain tone by 'flexible providers' might send the message that they lack understanding of students' needs, as well as of autism and its impact on students. However, from the 'flexible provider' perspective, they seem to convey the message that no two students are alike, and that different students' needs are as various as the autism community is wide. In other words, some students will be in need of more support than others and some students might not necessarily need to access disability services.

On the one hand, the importance of expert providers is that some students with autism may need or prefer to rely on providers with special experience in autism, its impact on students pursuing HE and their differing needs. Expert disability service providers emphasise that they have the necessary experience, conveying the message that the students can trust them.

However, these providers may appear as though they do not listen to those with different experiences (such as prospective students) and may disempower students by being in charge and control of the disability services. On the other hand, while 'flexible providers' value others' involvement, including students with autism, which is considered to be positive communication practice, they may risk losing their identity as providers and allowing students to entirely lead support practices. The tension between the two models means that those receiving disability services will have different choices and perspectives regarding which model is the best for meeting their needs (expert, flexible or mixed).

5.7 Summary and conclusion

The main themes discussed in this chapter relate to tensions regarding the terminology used to refer to students with autism and the nature of the educational provision for these students. In the case of both these themes, it was suggested through discussion that there is no one answer; instead, the websites are part of an ongoing and pre-existing debate regarding how to refer to students with autism, where to place them in schools and universities and how to support them. Although these are complex issues, it seems that a focus on meeting the needs of students with autism and a person-centred approach to decision making can reduce the tensions regarding terminology and educational provision. In terms of the universities' websites, the tones adopted by these websites seemed designed to help students have access to services. For example, they used an encouraging tone to urge students to disclose their disabilities and access the support provided by the universities.

Furthermore, this chapter discussed two contrasting ways of providing services: expert and flexible service provision. While some websites were more typical of one of these profiles than the other, often websites displayed elements of both as if they were held in tension Expert providers showed an understanding of students' needs and how autism impacted them. They delivered services based on this understanding and on the experiences of disability service providers, they were less likely to collaborate with others (for example, students) and seemed less likely to listen to students' voices or consider them experts in terms of their own needs. Expert providers used an empathetic tone to show their understanding of the difficulties associated with autism and an advisory tone when suggesting that students disclose their disability and access services and support. They invited trust from students based on a confidence in their own expertise. In contrast, flexible providers delivered

services to students with and without diagnoses, because they focused on responding to students' needs. Flexible providers tended to collaborate with others (for example, external bodies), and they adopted a person-centred approach. Flexible providers used an uncertain tone to indicate that the student may know best how autism is experienced and in order to communicate their flexibility in light of this experience. This uncertainty was also present when talking about the types of support needed by students with autism, implying that provision would reflect student perceptions of their own needs rather than make assumptions about what these needs would be. The development of these analytical models (flexible disability services providers and expert disability providers) are a contribution to knowledge because they can be applied to future analysis of any documentation from providers to offer a new understanding of disability services provided for students with autism in HE.

In addition, this chapter contributed to knowledge in other aspects. First, as mentioned in section 5.5 (The potential impact of disability services websites on students' decisions and choices), different meanings are being communicated via disability services websites and this is the first study in the world, as far as I know, that looks specifically at the web-based presence of services for students with autism and how information is shared through this medium with the visitors to disability services websites. Second, this research draws on the literature regarding the understanding of the dilemma of difference. To my knowledge, it is the first study that looked at the dilemma of difference as a lens through which to understand disability services websites from SA and UK universities. Students' voices are sometimes included and sometimes excluded from the services provided for them. This study is one of few to look at the use of students' voices on websites or to raise questions as to whether disability services websites in this research mirror what is happening in wider practice.

The aim of this discussion has been to bring the findings of the data to the known challenges of supporting autistic students, to show how it is an area of contested opinion and varied practice, that assumptions about students are visible on the websites and inform how support is framed and offered. Rendering visible what has been invisible has been the main contribution of this study and this visibility offers a starting point for potential change and development, not so much of what is offered but how this offer is communicated.

CHAPTER 6: Conclusion

6. Introduction

The main focus of this research is how universities and colleges in SA and the UK represent what they provide to support autistic students in these settings and how they portray the disability services they make available to these students. This concluding chapter presents a brief summary of the research, the limitations and strengths of the research, the contribution of the research to knowledge, recommendations for further research and practice and, finally, a personal reflection on the doctoral process.

6.1. Brief summary of the study

This research encompassed the use of a single methodology: documentary analysis comprising content analysis, written discourse analysis and thematic analysis. Documentary analysis proved to be a suitable tool that provided answers to the research questions. The different methods of analysis ensured that the websites could be explored for their content, the assumptions about autism that they expressed and the positioning of their support services.

6.1.1. Main findings of stage one

In the first stage of the research, I aimed to develop a general understanding of the accessibility of information about disability services available to autistic students by classifying the websites into high visibility, average visibility and low visibility, and considering ease of navigation. A further aim of the first stage was to identify provision types by classifying services as either generic-disability services or autism-specific. These aims were achieved by analysing the website data via content analysis. The findings showed that most of the provisions for autistic students on Saudi and UK university websites comprised generic-disability services rather than autism-specific services. Despite this lack of specific services most of the disability services websites were highly visible and navigable.

6.1.2. Main findings of stage two

In stage two, written discourse analysis was chosen to understand the language used when communicating autism provision, to uncover the meanings underlying the text and to understand the underlying disability discourse. In this stage, a further method, thematic analysis, was used to discover the provisions for autistic students claimed by universities. The findings showed that the studied Saudi and UK universities communicated different messages regarding autism and autistic students. For example, some UK universities stated their understanding of autism using technical terms or viewed autistic students principally as receivers of disability services. In addition, the Saudi and UK universities communicated different inclusive approaches and ways of working with students with autism, for example, communicating teamwork or using a person-centred approach.

In terms of assumptions made about students with autism, both the Saudi and UK universities made assumptions about the support needs of these students. In addition, some universities assumed that these students had problems in specific areas (e.g., problems staying focussed during lectures). In terms of the use of language to communicate certain messages, a range of different tones were evident in both national contexts (SA and the UK).

In addition, the findings of this stage suggested that there are two distinct kinds of disability service providers: *expert providers* and *flexible providers*, and texts showed that universities might adopt both types of service provision at the same time. Expert providers position themselves as experts in understanding the needs of autistic students and the impact autism has on them. Disability services provided to autistic students were based on the experience of these service providers, who seem to make decisions about how they meet the needs of autistic students without consulting others. Saudi universities strongly viewed autistic students as receivers of support, while viewing themselves as expert providers. The tone of these universities' websites did not signal an inclination to listen to students' voices or collaborate with these students or others while some of the UK universities tended to listen to students' voices.

On the other hand, flexible providers appear to use flexible approaches and methods of support. For example, they involve students in decisions about the services and support that they may need in HE settings. Flexible providers adopt a more uncertain tone when

describing how they can support students on the autism spectrum, which seems to imply that the service providers are not dictating to autistic students what would be helpful for them, thus positioning the student as a potential expert on what would be helpful for him or her. Flexible providers also expect that students will experience the same provision in multiple ways and they are flexible in terms of not excluding undiagnosed students from accessing disability services.

Some universities used language that indicated both expert and flexible provision simultaneously. For example, they might have been flexible in terms of collaborating with autistic students but still viewed students as receivers of disability services. Arguably, disabled students should be empowered to advocate for their views and some of the UK universities in this study did seem to invite a student response and to communicate an intention to tailor support to the students' needs.

6.1.3. Main findings of stage three

In the final stage of the research, content analysis and thematic analysis were used to understand the influences that seemed to shape the organisation of disability services (thematic analysis) and the differences between SA and the UK in terms of the organisation of disability services available for autistic students (content analysis).

Distinct influences seemed to shape how disability services are organised in Saudi and UK universities. For example, the organisation of disability services in the two studied Saudi universities differed from that in the two studied UK universities by being influenced by cultural norms related to gender and external expertise. The Saudi and UK universities' disability services seemed to be shaped by different external and internal influences such as legislation/policy and the university's strategic plan. However, these influences may result in different specific content; for example in the UK universities there is an emphasis on equality due to the external influence of the 2010 Equality Act (Hepple, 2010; Lewis *et al.,* 2012).

According to their disability services websites, similarities of the two Saudi and two UK universities regarding disability services for autistic students were that they seemed to assign a disability advisor, provided training to faculty members and staff and offered academic and social-behavioural support to autistic students. Regarding the differences between the two

Saudi and the two UK universities' disability services websites, only the UK universities provided information about financial aid for autistic students, while the use of peer mentors and mental health support was mentioned in the Saudi context but not in the UK context. Prioritising some services over others might be an indicator of the different ways of working with students with autism in the Saudi and UK contexts.

6.2. Limitations and strengths of the study

Websites are multimodal media that bring together different semiotic modes, including graphics, photos, videos, sound, cartoon drawings and text (Berger, 2016; Krisjanous, 2016). Multimodal discourse analysis aims to understand how a range of different semiotic resources integrate to create meaning (Berger, 2016; Krisjanous, 2016). Multimodal discourse analysis involves a relatively new set of approaches and concepts and extends the study of language by combining it with various other phenomena and materials (e.g., symbols, images, gestures and music) that structure both communication and the way in which the construction of meaning is interpreted. In this research, I recognised that websites involve multimodal media; however, I did not use multimodal discourse analysis to conduct the data analysis as I relied only on the text. I only became aware of this kind of discourse analysis (multimodal) after collecting and analysing the data, which limited this study. In the future, it would be interesting to find out what discourses seem to be communicated by the disability services websites using this type of analysis. However, the use of diverse documentary analysis in the current research (content analysis, thematic analysis and written discourse analysis) yielded a deep understanding of how universities communicate their disability services through their websites to autistic students.

Another limitation is that the original design, involving a questionnaire, was not implemented due to a low response rate and the absence of participants. Consequently, the absence of a survey meant that the original research aims, such as the level of autism awareness among the participants and the views of participants regarding provisions for autism, were not addressed. The final research design utilised a single method (documentary analysis) instead of the originally proposed mixed methods design (survey, interviews and documentary analysis). However, through detailed discourse analysis, the underlying assumptions and messages of the various disability services were explored. The assumption of this study was

that in this act of communicating a university's offer to students with autism, intention, beliefs and values are also communicated.

I would argue that a key strength of the approach I took was that discourse analysis uncovered the function of the text and the linguistic choices that shaped the meaning, and I also analysed the meaning that these choices carry. Discourse analysis is beneficial as it focuses on the meanings and actions created by individuals who produce the language. In addition, thematic analysis looks for the broader themes and functions of language, which also helped to answer the research questions.

6.3. Contribution to knowledge

This research contributes to the understanding of the use of written discourse analysis in the special education domain. For example, it is the first research to study disability services websites using discourse analysis to develop an understanding of how disability services providers communicate their services to students with autism and to the visitors to disability services websites who look for information about autism services in HE. In addition, this research contributes to autism and HE research literature because, as far as I am aware, it is the first to examine how universities communicate their disability services to autistic students in the world. It was found that there are many positions and multiple answers regarding this phenomenon. The communicated information took the form of three different units (messages, assumptions and form – use of language) which gave different answers regarding the messages communicated by the disability services websites.

In addition, due to the use of data driven (inductive) discourse analysis, this research made another important contribution to knowledge. The data reported here reveal a comparison between flexible responders and expert deliverers of disability services. While discourse around disability is well understood (including ideas about the medical and social models), the analytical tool offered by the concepts of expert and flexible disability services providers can widen our understanding of disability services because the concepts provide different perspectives on understanding how disability services are provided to students on the autism spectrum. They indicate an inherent tension between the need to be an expert provider but also to acknowledge the expertise of those who experience autism. It also shows how all these different discourses are taken up on the websites but do not necessarily form a coherent

message, because the tensions they represent are not fully resolved but are visible in the way providers share their support and provision.

Furthermore, the literature suggests that students are often reluctant to access services (Marshak *et al*., 2010). The data reported in the current study suggest that examining the voice or tone of a website's offer might partly explain and account for this. The type of research undertaken in this study was able to identify these different voices and, therefore, it is likely that any reader would also respond to these implicit messages. Consequently, while this might be a clear call for future research to explore reader response, this data also contributes to an understanding of the message itself.

6.4. Recommendations for further research and practice

There are a number of research projects that could follow on from this study to support the development of a greater understanding of the way students or potential students respond to the representation of disability services. I have proposed two types of research studies: a) studies that explore students' views about the way autism and services are represented and their responses to this, and b) a set of studies on how universities decide to represent their services and why the outcomes vary in different ways.

For the first type of recommended research studies, it is suggested that the research be conducted based on the influence of the tone (e.g., an uncertain tone) used to present provisions that either encourage or discourage students to access disability services. In addition, an issue that should be addressed is the students' perspectives regarding how universities communicate with them. Research is also required to find out what autistic students prefer in terms of services and support: do they prefer autism-specific provisions or generic-disability services that can be personalised to meet their specific needs? It is also recommended that research be conducted to determine how information available online about disability services influences students' choices of universities or colleges.

For the second type of recommended research studies, this type of research may alert universities to how they present autism services and how they position autistic students when they communicate their provision. Disability service providers could examine their own values and beliefs and consider whether their websites communicate these values or whether

they send mixed messages. A recommendation might include that disability service providers review their websites for a consistent voice and philosophy or at least to ensure no unintended discourses are articulated. This might be useful for both Saudi and UK universities in terms of encouraging them to understand the discourses being presented when they communicate their disability services to autistic students, such as considering autistic students as either receivers of support or partners in delivering and developing services. One recommendation that might be made in light of this study's findings is that universities maintain a balance between being a flexible responder and an expert deliverer of services. This means that universities might position themselves as experts in autism services while, at the same time, consider autistic students as individuals who know what works for them and what meets their needs. Thus, providers should continually evaluate their practice and determine the extent to which they should include students' and others' voices.

In addition, further research is needed to understand why universities' websites show some services and not others and why it seems that universities prioritise some types of support over others.

Finally, the scarcity of detailed statistics is common in the Saudi education system; hence, there are no statistics regarding the number of autistic students who attend Saudi HEIs. It is suggested that, in the future, the Ministry of Education focuses on this aspect of their role and gathers data about Saudi HE in order to enable the examination of HE in relation to different groups of students (e.g., autistic students) and for educational research purposes.

6.5. My PhD journey and a personal reflection on the doctoral process

My PhD journey started in 2012 when I met a young man with autism who struggled to find a place in Saudi universities and colleges due to his autism diagnosis. His case, discussed in the introduction chapter, inspired me to conduct this research. I was interested in understanding the barriers that led to the exclusion of students with autism in SA and in identifying the level of services and support available to them in order to come up with a suggested model of services and support on a national level. Little, if anything, is known about this area of research in SA. Initially, my research was under the supervision of Dr Andrea MacLeod and Dr Kerstin Wittemeyer from the University of Birmingham, who provided me with important suggestions and significant support during the first year of my PhD. My research was also

supervised by Dr Christopher Robertson from the same university. I was undertaking a course on inclusion of learners with disabilities, and he was the leader of this course. Following Dr Robertson's recommendation that I present my initial findings regarding the situation of including students with autism in SA at a conference, I gave an oral presentation at an Ongoing Research in Education Studies conference at the University of Oxford: 'Accessing higher education in SA: Opportunities and challenges for student with autism spectrum conditions'. I emphasised that little attention had been given to opening up opportunities for autistic students to access HE in SA. Therefore, my research sought to examine the challenges to developing more accessible HE in SA for this group of learners and to make use of international exemplars to identify opportunities for them to participate in HE alongside their peers. My research aimed to identify what opportunities for HE these students currently had; evidence suggests that these are exceptional, but examples do exist. I anticipated drawing on specific stories of both success and failure. To do this, I proposed using qualitative research methods, including semi-structured interviews and associated content analysis. I intended the interviews to involve a range of key participants, but, most importantly, the students themselves (Almasoud, 2013). I conducted the literature review and completed the research design for the study. However, due to an absence of students who disclose an autism diagnosis in Saudi HE settings, identifying a sample of students with autism was impossible. I realised that this area of research was challenging, especially in the Saudi context.

By the end of the first year of my PhD course at the University of Birmingham, I had passed all the modules and graduated with a Postgraduate Certificate in Educational Research from the University of Birmingham. Having then decided to move to the University of Exeter, under the supervision of Professor Jane Seale, the focus of my research changed from understanding the experiences of students with autism to studying the experiences of HE staff involved with students with autism. During the first two years, I re-wrote my literature review and changed my research design to a case study. At this stage, my research included a survey, interviews and a documentary analysis. I presented my preliminary findings of the documentary analysis as an oral presentation in 2016 at The Second Aspect Autism in Education Conference in Melbourne, Australia: 'Meeting needs at the university level for students with autism'. I presented my findings regarding how disability services for autistic students are organised in the UK compared with SA. The comparison identified the gaps in, and provided a clearer picture of, current HE practices. After the conference, I experienced

another change in supervisor and some changes in terms of the research design. Studying the perspectives of staff at a disability service centre was difficult, as explained in the methodology chapter of this research. None of the staff was interested in taking part in an interview and the survey had a very low return rate. With the help of my current supervisors, Professor Hazel Lawson and Dr Susan Jones, I considered other research designs to approach my research interest: access to HE for autistic students. I decided to look at these services using the documents provided by HE settings in SA and the UK. This proved to be an interesting area of research and produced this current PhD thesis. I recently presented my findings at the 1st Saudi Autism Research Conference and submitted two conference abstracts for the 1st Regional Autism Conference, which will be held in Oman, and the Forum of Services for people with disabilities in HE in SA. I look forward to publishing the findings of my PhD in peer-reviewed journals.

The changes in universities, supervisors and research focus I experienced during my PhD course slowed my progress to some extent; however, the positive side of this is that I have gained rich experience and discovered many ideas I can now develop further, which I believe will help me a great deal to develop my career as a researcher. In addition, as a research student, completing a piece of original research has influenced the way I now think about research; it has shown me there can be multiple answers to research questions and there is more than one understanding of a phenomenon. In addition, I used to believe that documentary analysis could not be used as a single method for research and that multi-method design was the preferred way to gain knowledge. However, I found that using different kinds of documentary analysis could produce valuable knowledge and a rich understanding of the phenomenon under study. I am passionate about going back to my original design as things have changed over the past few years and I believe that conducting such research is now possible.

In conclusion, this research was about what is revealed about disability services for, and how they are communicated to, autistic students in HEIs in SA and the UK through the medium of university websites using documentary analysis. It hoped that this original research will open the doors for further research on this new area to help develop disability and autism research.

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APPENDICES

APPENDIX 1: Stage one: A screenshot of the content analysis of the UK universities

	HE provider	Total number of students with autism	Method of searching for the Disability services	The visibility of the disability services	Ease of navigation the website	The provision for ASD student	comment
1	The research question: How is the provision for students with autism presented in the UK universities' websites?						
3	The University of Aberdeen	31	Google search	Higly visible	Average	Generic	
4	Aberystwyth University	78	Google search	Higly visible	Low navigation	Generic	
5	Anglia Ruskin University	60	Google search	Higly visible	Average	Generic	
6	Aston University	25	Google search	Higly visible	Average	Generic	
7	Bangor University	51	Google search	Higly visible	Average	Generic	
8	Bath Spa University	55	Google search	Higly visible	Excellent	Autism Specific	Detailed information
9	The University of Bath	41	Google search	Higly visible	Average	Generic	
10	University of Bedfordshire	26	Google search	Higly visible	Low navigation	Generic	
11	The Queen's University of Belfast	199	Google search	Higly visible	Excellent	Autism Specific	*Asperger's social and support group
12	Birkbeck College	35	Google search	Higly visible	Average	Generic	*Little information
13	Birmingham City University	51	Google search	Higly visible	Average	Generic	
14	The University of Birmingham	66	Google search	Higly visible	Average	Autism Specific	
15	University College Birmingham	6	The provider's website	Low visibility	Low navigation	Generic	
16	Bishop Grosseteste University	8	Google search	Higly visible	Average	Generic	
17	The University of Bolton	39	The provider's website	Average visibility	Low navigation	Generic	
18	The Arts University Bournemouth	6	The provider's website	Low visibility	Average	Generic	
19	Bournemouth University	40	The provider's website	Average visibility	Average	Generic	
20	The University of Bradford	26	Google search	Higly visible	Average	Generic	
21	The University of Brighton	53	Google search	Higly visible	Low navigation	Generic	
22	The University of Bristol	30	The provider's website	Higly visible	Low navigation	Generic	
23	Brunel University London	37	Google search	Higly visible	Excellent	Generic	
24	Buckinghamshire New University	18	Google search	Higly visible	Excellent	Generic	
25	The University of Buckingham	3	The provider's website	Low visibility	Low navigation	Generic	

HE provider	Method of searching for the Disability services	The visibility of the disability services	Ease of navigation the website	The provision for ASD student	comment
Umm Al-Qura University (Male and female sections)	Google search	Highly visible	Excellent	Generic	Stating commitment for change influenced by the Saudi Vision 2030.
King Saud University (Male and female sections)	Google search	Highly visible	Excellent	Autism Specific	No specific provision for students with disabilities. Sudents with disabilities access student support as other students.
Islamic University (Male and female sections)	The provider's website	Low visibility	Low navigation	Generic	Stating commitment for change influenced by the Saudi Vision 2030.
King Fahd University of Petroleum and Minerals (Male and female sections)	Google search	Highly visible	Excellent	Generic	
King Abdulaziz University (Male and female sections)	Google search	Highly visible	Average	Autism Specific	* No specific provision for students with disabilities. Students with disabilities access student support as other students. * Stating commitment for change influnced by the Saudi Vision 2030.
Al-Imam Mohammad Ibn Saud Islamic University (Male and female sections)	The provider's website	Low visibility	Low navigation	Generic	
King Faisal University (Male and female sections)	Google search	Highly visible	Excellent	Generic	*Stating commitment for change influenced by the Saudi Vision 2030. * No specific provision for students with disabilities. Students with disabilities access student support as other students.
King Khalid University (Male and female sections)	The provider's website	Low visibility	Average	Generic	No specific provision for students with disabilities. Students with disabilities access student support as other students.
Taibah University (Male and female sections)	The provider's website	Low visibility	Average	Generic	* Stating commitment for change influenced by the Saudi Vision 2030. * No specific provision for students with disabilities. Students with disabilities access student support as other

APPENDIX 2: Stage one: A screenshot of the content analysis of the Saudi universities

APPENDIX 3: Stage two: Example of the piloting of the discourse analysis (Keele University, 2016)

Note: The colour red refers to 'messages', green refers to 'assumptions' and blue refers to 'form'.

Support for students with Asperger's Syndrome/ Autism (Form of the language used to refer to autistic students)

Asperger's Syndrome/ Autism

We at Keele understand (Communicating teamwork within the university and with outside organisations) that Asperger's Syndrome and a diagnosis on the autistic spectrum is not uncommon (Using an empathetic tone)

Currently we have a number of students with Asperger's Syndrome (Form of the language used to refer to autistic students)

) successfully studying a wide range of subjects from maths and sciences to humanities (Viewing autistic students in terms of their abilities/disabilities and difficulties) (Using an advertising tone)

If you have been diagnosed with Asperger's Syndrome, you are advised (Using an advisory tone) to contact Disability & Dyslexia Support to make an appointment for an assessment of need and bring your diagnostic report with you. (Using an imperative tone) (Considering autistic students as receiver of support)

If you do not have a report, or are unsure about what to do, Disability services can offer advice. (Communication an understanding of autism in terms of the services autistic students are presumed to need) (Assuming that these students have support needs). Disability & Dyslexia Support will work with you to identify your individual support needs and may be able to offer: (Uncertain tone) (Communication an understanding of autism in terms of the services autistic students are presumed to need) (Assuming that these students have support needs)

- Extended library loans (Assuming that autistic students have support needs)
- Modified exam arrangements (Assuming that autistic students have support needs)
- Help to obtain accommodation requirements* (Assuming that autistic students have support needs)

- A Study Buddy to help with organisation of time (Assuming that autistic students have support needs)

- Mentor to help you with motivation and familiarity with the academic system (Assuming that autistic students have support needs)

- Note takers (Assuming that autistic students have support needs)

- Specialist tuition (Assuming that autistic students have support needs)

- Liaison with academic staff to ensure that they are aware of the impact of Asperger's Syndrome on your study skills (Communicating teamwork within the university and with outside organisations) (Assuming that autistic students have support needs) Liaison with academic staff to ensure that you receive lecture notes in advance and/or permission to record lectures. (Communicating teamwork within the university and with outside organisations) (Assuming that autistic students have support needs)

In order to access full support you will need to apply for Disabled Student's Allowance Disability & Dyslexia Support can advise you on funding bodies and applications. (Assuming that autistic students have support needs) (Assuming that autism comes with an added cost to the individual) **Disabled students who make Keele their first choice are guaranteed accommodation on campus.** (Using an encouraging tone) (Form of the language used to refer to autistic students).

	ANALYTICAL QUESTION	CODE	University of Keele	Imperial College London,
1 / 3	How the understanding of autism is communicated in the text?	Communicationg an understanding of autism in terms of its impact on students		The transition from school to university can be challenging for any young person, but it can be especially so for someone on the Autism Spectrum.
4		Communicationg an understanding of autism in terms of the services autistic students are presumed to need	If you do not have a report, or are unsure about what to do, Disability services can offer advice Disability & Dyslexia Support will work with you to identify your individual support needs and may be able to offer:	Access arrangements for examinations Screening and assessments for specific learning difficulties
5				Learning and teaching support, e.g. longer library loans accessing assistive technologyspecialist one-to-one study skills support and specialist mentoring

APPENDIX 4: Stage two: A screenshot of the piloting of the discourse analysis

APPENDIX 5: Stage two: A screenshot of the Excel file which was used to organise the findings of the discourse analysis

ANALYTICAL UNIT	ANALYTICAL QUESTION	CODE	ALL EVIDENCE FROM BATH SPA UNIVERSITY	ALL EVIDENCE FROM UCL
FORM	at form does the message ta	Using quotes from students and parents	"The fact that I've been able to have a support worker has been an enormous help to me, keeping me on track with my work, as well as being a friendly face who I know will help me to relax	
		Using an advisory tone	You are strongly advised to apply as early	We encourage you to make contact with us so we can help identify services appropriate to your individual needs
		Using a welcoming tone		Prospective students are welcome to cont
		Using an uncertain tone		below, may find the information on our prospective students pages useful' 'Students on the spectrum may find it useful to plan how to manage learning and other aspects

APPENDIX 6: Stage two: The initial codes for the thematic analysis

No.	Universities Codes	U1	U2	U3	U4	U5	U6	U7	U8	U9	U10	U11	U12	U13	U14	U15	Total
1	Study skills sessions	√	√	X	X	X	X	√	√	X	X	√	√	X	X	√	7
2	Exam arrangements	√	X	√	√	X	√	X	√	√	√	√	X	X	√	√	10
3	Library services	√	X	√	X	X	X	X	X	X	X	√	X	X	X	√	5
4	Individual Academic plan	√	X	X	X	X	X	X	X	X	X	X	X	X	X	√	2
5	Computers	√	X	√	√	X	X	X	X	X	X	X	X	X	X	X	3
6	Assistive technology	√	X	√	√	√	X	X	√	X	√	X	X	X	√	√	8
7	Transition services	X	√	X	X	√	√	√	√	X	√	√	X	X	X	X	7
8	Early move into Halls	√	X	X	X	X	X	√	X	X	X	X	X	X	X	X	2
9	Advice on applying for DSA	√	X	X	X	X	√	X	√	√	X	√	X	X	X	X	5
10	Services related to the DSA	√	X	√	√	√	X	X	X	√	X	X	√	X	X	X	6
11	Disability Advisor	√	√	√	√	X	√	X	√	√	X	√	X	√	X	√	10
12	Peer Mentor Scheme	√	√	X	X	√	√	√	X	X	X	√	√	X	√	X	8
13	Links to external support	√	X	√	√	√	X	√	√	X	X	√	X	X	X	X	7
14	Assessment of academic need	X	√	√	√	X	X	X	X	√	X	√	X	X	X	X	5
15	Social skills training	X	√	√	√	√	√	√	X	X	X	X	X	√	√	√	9
16	Handouts of the lectures	X	X	√	√	X	X	X	X	X	X	X	X	X	X	X	2
17	Supporting staff and/ or faculty	X	X	√	√	X	X	X	X	X	X	√	X	X	√	X	4
18	Employment skills	X	X	√	√	X	X	X	X	X	X	X	√	X	X	√	4
19	Psychological services	X	X	√	√	X	X	X	X	X	X	X	X	X	X	√	3
20	Mentoring	√	√	√	√	√	√	X	X	√	X	X	√	√	X	X	9
21	Work Scheme	X	X	X	X	√	X	X	X	X	X	X	X	X	X	X	1
22	Independent living	X	X	X	X	X	X	√	X	X	X	X	X	X	X	X	1
23	Note taking	X	X	X	X	X	X	X	√	X	X	X	X	X	√	√	3
24	Support worker	√	X	X	X	X	X	X	X	√	√	X	X	X	X	X	3
25	Registration process	X	X	X	X	X	X	X	X	X	X	X	X	X	X	√	1
26	Medical care	X	X	X	X	X	X	X	X	X	X	X	X	X	√	X	1
27	DSA	√	X	√	√	√	X	X	X	√	X	√	√	√	X	X	8
28	Accommodation services	√	X	X	X	X	X	√	X	√	X	X	X	X	X	X	3
29	Study advisor	X	X	X	X	X	X	X	X	X	X	√	X	X	√	√	3
30	Assistant teacher	X	X	X	X	X	X	X	X	X	X	X	X	X	√	X	1

- U1= Bath Spa University, U2= Glasgow Caledonian University, U3= UCL, U4= UCL (IOE), U5= Newman University, U6= University of Surrey, U7= York St John University, U8= University of Worcester, U9= University of Sussex, U10= University of Derby, U11= University of Leicester, U12= Nottingham Trent University, , U13= University of Kent, U14=KSU, U15=KAU
- √= mentioned, X=Not mentioned

APPENDIX 7: Stage two: Thematic analysis: Definitions of themes, the grouping of codes and example quotes from data

Name of theme/sub-theme	Definitions/ Explanations of themes	Codes	Example quotes
Theme one: Support before entering the university	This theme is related to the support that the universities claimed to provide in the time between secondary school and higher education		
Sub-theme: Transition support	Transition support refer to the support that the universities claim to offer before the start of the student's course at the university.	Early move into halls. Transition services	'The Disability Team, in partnership with the National Autistic Society (Scotland), delivers a Summer Transition Programme' (Glasgow Caledonian University, 2017)
Sub-theme: admission services	This sub-theme refers to the support that universities seem to offer to the autistic students when they want to apply for the university/college.	Registration process	'Helping new female students in the registration process' (Dean of Student Affairs, 2013a).
Sub-theme: Assessing academic needs	This sub-theme means assessing the students' educational needs	Assessment of academic need	'to assist with the assessment of needs prior to the start of the academic session' (Glasgow Caledonian University, 2017)
Sub-theme: Individual Academic plan	This sub-theme is about developing an individual academic plan in order to meet the autistic students' needs	Setting an individual academic plan	'Liaison with your lecturers/tutors about your Academic Access Plan' (Bath Spa University, 2017)
Sub-theme: Financial support	This sub-theme refers to any support related to funding for the autistic students, including supporting the autistic students in applying for funding.	DSA Advice on applying for DSA Services related to the DSA Work Scheme	'Provide advice and assistance with applying for Disabled Students' Allowances (DSA)' (University of Sussex, 2016)
Theme two: Support while studying at the university/college	This theme refers to the support that the universities claim to offer during the student's course of study at the university.		
Sub-theme: Academic support	This sub-theme is about any support the universities claim to offer to the autistic students to meet their academic needs	Note taking Computers Assistive technology Handouts of the lectures Study advisor Study skills sessions Exam arrangements Supporting staff and/ or faculty Library services Peer Mentor Scheme Assistant teacher Support worker Mentoring	'One to one study support for students with Asperger syndrome/autism spectrum' (University of Leicester, 2017).
Sub-theme: Social support	This sub-theme is about any support the universities claim to offer to the autistic students to meet their social needs	Peer Mentor Scheme Social skills training	'Being put in touch with other students on the Autistic Spectrum'(Newman University, 2017)
Sub-theme: Emotional support	This sub-theme is about any support the universities claim to offer to the autistic students to meet their emotional needs	Psychological Services	'Student Psychological Services - Provides counselling and other resources for students facing emotional and psychological problems' (UCL, 2017)

Sub-theme: Mentoring	This sub-theme is about any support the universities claim to offer to the autistic students to support the student in different aspects such as obtaining a diagnosis and supporting them academically.	Support worker Disability Advisor Peer Mentor Scheme	'Drop-in sessions to meet with a Disability Advisor' (UCL, 2017)
Sub-theme: External services	This sub-theme is about the services that seem to be offered to the autistic students by external bodies	Accommodation services Medical care Links to external support	'Provide medical care through coordination with a private hospital' (Dean of Student Affairs, 2013a).
Theme three: Preparation for life after university	This theme is about any support the universities claimed to offer to the autistic students in order to support them after their graduation from the university		
Sub-theme: employment	This sub-theme is related to support about employment. The universities seem to provide the support that develops autistic students' employment skills.	Employment skills	'Career support: The centre informs the private and public business sectors about male graduate students with special needs from King Abdul Aziz University' (Dean of Student Affairs, 2013a).

APPENDIX 8: Stage two: A screenshot of the Excel file which was used to organise the findings of the Thematic analysis

	A	B	C	D	E
1	Themes	Sub-thems	Codes	U1	U2
2	Theme one: Support before entering the university	Sub-theme: Transition support	Early move into Halls	• The student can undergo early induction and move into the Halls Early induction and move into Halls	
3			Transition services		Summer Transition Programme (Autism/Aspergers) • The Disability Team, in partnership with • provide a smoother transition to incoming students from school or FE An invitation to the Summer Transition Programme is extended to all applicants who have disclosed a diagnosis (or who have identified with a diagnosis) on the autism spectrum. All queries regarding the Summer Transition Programme for students on the autism spectrum should be directed to the Disability Team

APPENDIX 9: Stage three: Example of the Content analysis and the thematic analysis (Sheffield Hallam University, 2015a, Sheffield Hallam University, 2015b and Sheffield Hallam University, 2015c)

Note: The purple text is the content analysis coding
The blue text is the thematic analysis coding

Support for specific disabilities

Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder (ADD/ADHD)
Autism and Asperger Syndrome (Autism)
Deafness and hearing impairment (Hearing impairment)
Medical conditions and physical disabilities (Physical disabilities)
Mental health difficulties (Mental health difficulties)
Specific learning difficulties (Learning difficulties)
Visual impairment' (Visual impairment) (Sheffield Hallam University, 2015a).
We are split into three teams. Advisory Team (Advisory Team) support Worker Team (Support Worker Team) and Sheffield Regional Assessment Centre' (Sheffield Hallam University, 2015c). (Assessment Centre team)
- The University is committed to inclusion and equal opportunities and welcomes applications from disabled students. (Sheffield Hallam University, 2015d). (Inclusivity) (Equality). We highlight the importance of anticipating the needs of disabled students and promote inclusive practice (Sheffield Hallam University, 2015d). (Inclusivity)
- In keeping with the Equality Act 2010, you are encouraged to disclose your disabilities. This reduces the risk of you being disadvantaged and ensures we meet our responsibilities (Sheffield Hallam University, 2015d). (Equality Act 2010) (Equality) Ensure that the University is compliant with its legal responsibility. The University must not discriminate against disabled students by failing to make reasonable adjustments. We provide learning contracts and deliver specialist services to help ensure this' (Sheffield Hallam University, 2015d). (Equality Act 2010)
- 'The University

- adopts the social model of disability, recognising that a person may be restricted or disadvantaged by their environment (Social model)
- understands that these restrictions can, with appropriate action, be alleviated (Social model)
- identifies any barriers and obstacles to learning and aims to remove them (Social model)

Within the Disabled Student Support team, we (Disabled Student Support team)

- Provide the support services, equipment and physical adaptations which remove such barriers and obstacles' (Sheffield Hallam University, 2015d). (Social model)

- 'Ensure all relevant staff are aware of the recommendations made for you so they can put them into practice' (Sheffield Hallam University, 2015b) (Social model)

Autism and Asperger Syndrome

Autism and Asperger Syndrome are conditions on the autism spectrum. The autism spectrum is very diverse, and no two individuals with autism or Asperger syndrome are the same. However, people with autism spectrum conditions are characterised by cognitive processes, or ways of thinking, which are different to people who are not on the autism spectrum. These differences may affect areas such as

- ways of communicating, both verbal and non-verbal
- interacting with others and making friends
- dealing with choice and change
- approach to studying
- levels of interest in particular topics
- sensitivity to their environment

Services and support

We can provide practical support with your course through a learning contract. Our focus is on you as a learner and your individual needs to access your studies (Academic support) (Student focused services). Support can be provided for lectures and seminars, assignments and exams (Academic support).

You may be eligible for Disabled Students' Allowances (Financial aid). If so; you may receive additional support through a study needs assessment. (Academic support).This can include

- support from a mentor (Academic support)
- support from study skills support tutor (Academic support)
- specialist equipment and software (Academic support)
- arrangements put into place for exams(Academic support)
- extra time to complete assignments (Academic support)

Support is offered according to your individual needs and will be discussed with you in your guidance appointment or study needs assessment (Student focused services).

Some students with autism spectrum conditions do not class themselves as disabled and therefore are not aware they can access, or choose not to access, support. In general, the earlier support is put in place, the better as it often leads to greater independence in the long run. However, you can opt into support at a later stage if you wish to.

APPENDIX 10: Stage three: A screenshot of the Excel file which was used to organise the findings of the Content analysis

	Services (Categories)	KSU	KAU	University of Kent
2	Faculty /staff training	The special needs centre cooperates with a team that specializes in teaching students with autism in order to prepare materials on what autism is, what services are provided by the centre and how to implement necessary strategies to modify the curriculum		The service is committed to the **professional development** of its staff Working with the Human Resources Department to ensure the recruitment and retention of the best staff, and to support and encourage Student Services staff to pursue their own personal professional development, in line with the University's strategic aims
3	Disability advisor		The disability advisor can offer support to the male student to help in overcoming social and psychological difficulties	You will be asked to provide evidence of disability, such as a doctor's letter or psychological report, and you will be asked to attend a meeting with a Student Support Adviser.

APPENDIX 11: Stage three: The initial codes for the thematic analysis

√= mentioned, X=Not mentioned

No.	Universities	KSU	KAU	Sheffield Hallam University	University of Kent
	Codes				
1	Objectives		√		√
2	Student-focused services	√		√	√
3	Experts	√			
4	Collaborative work	√	√		√
5	Accessibility				√
6	Accountability				√
7	Vision	√	√		√
8	Equality			√	√
9	Data Protection Act1998				√
10	Diversity				√
11	Inclusivity	√	√	√	√
12	Empowerment				√
13	Innovation				√
14	Honesty				√
15	ADD			√	
16	ADHD	√		√	
17	Autism	√		√	
18	Hearing impairment	√		√	
19	Physical disabilities	√		√	
20	Mental health difficulties	√		√	
21	Learning difficulties	√		√	
22	Visual impairment	√		√	
23	Advisory Team			√	
24	Support Worker Team			√	
25	Assessment Centre team			√	
26	Equality Act 2010			√	
27	Social model			√	
28	Disabled Student Support team			√	
29	Associations	√			
30	International universities	√			
31	Care for Disabled System 2000	√			
32	United Nations Convention	√			
33	Communication disorders	√			
34	Gender		√		
35	Mission	√	√		

APPENDIX 12: Stage three Thematic analysis: definitions of themes, the grouping of codes and example quotes from data

Name of theme/sub-theme	Definitions/ Explanations of themes	Codes	Example quotes
Theme one: External influences	This theme is about influences that are external to the universities. External influences include the country's culture, policies passed by the government, disability discourses and external bodies.		
Sub-theme:1 Culture in relation to gender	This sub-theme is about the influence of the Saudi culture on the organization of disability services. It is specifically related to the segregation between male and female individuals when providing services in society.	Gender	Special needs centre for male students (Dean of Student Affairs, 2013 a).
Sub-theme: 2 Legislation and policy	This sub-theme is about the influence of national and international policies on the organization of disability services.	Data Protection Act1998 Equality Act 2010 Care for Disabled System 2000 United Nations Convention	'In keeping with the Equality Act 2010, you are encouraged to disclose your disabilities' (Sheffield Hallam University, 2015d).
Sub-theme:3 External expertise	This sub-theme is related to the influence of the experience of external bodies, institutions and individuals with specific experience in the field of disability services.	International universities Associations Experts	The university refers to the literature on special education, including studies by the Association on Higher Education and Disability (AHEAD) (KSU, 2013).
Sub-theme:4 Disability models and discourses	This sub-theme is about the influence of disability discourses on the organization of disability services.	Social model	'The University adopts the social model of disability' (Sheffield Hallam University, 2015d).
Theme two: Internal influences	This theme is about influences that are internal to the university, which includes the university's strategic plan, organising disability services base on the type of disability or disability services teams. The institution's values and inclusive practices.		
Sub-theme:1 Strategic planning	This sub-theme is related to the influence of the institution's strategic plan which often includes its vision, mission, and objectives	Vision Mission Objectives	'The special needs centre's vision is to specifically concentrate on serving university students with special needs' (Dean of Student Affairs, 2015b)
Sub-theme: 2 Type of disability	This sub-theme is about the influence of the type of disability on the organization of disability services. The disability services are personalized to meet the needs' of students with a specific disability such as autism.	Communication disorders Visual impairment Learning difficulties Mental health difficulties Physical disabilities Hearing impairment Autism ADHD ADD	Autism disorder (KSU, 2013)
Sub-theme: 3 Disability services teams	This sub-theme is about the influence of disability services teams on the organization of disability services. The disability services are divided into several groups based on the title of the disability services team. For example, the advisory team offers advice for disabled students.	Disabled Student Support team Support Worker Team Advisory Team Assessment Centre team	'We are split into three teams. Advisory Team, Support Worker Team and Sheffield Regional Assessment Centre'(Sheffield Hallam University, 2015c).
Sub-theme:4 Values	This sub-theme is about the influence of the institution's values on the organization of disability services.	Student-focused services Empowerment Innovation Accountability Honesty	Empowerment means 'supporting and enabling students, making a strong contribution to their positive experience of Kent, celebrating their successes and preparing them for a successful life after graduation' (University of Kent, 2014a).
Sub-theme5: Inclusive concepts	This sub-theme is about the influence of the inclusive concepts on the organization of disability services. For example, services are equally provided for the university's students due to the inclusive concept 'equality'.	Collaborative work Accessibility Equality Diversity Inclusivity	'A comprehensive centre called the 'Special Needs Centre' was established within the office of the Dean of Student Affairs to serve the university's male students with special needs' (Dean of Student Affairs, 2013 a).

APPENDIX 13: Stage three: A screenshot of the Excel file which was used to organise the findings of the Thematic analysis

	Themes	Sub-thems	Codes	KAU	University of Kent
1					
2	External influenc	Culture in relation to gender	Gender	Female students with special needs (12) Male students with spccial needs (18)	
3		Legislation and policy	Data Protection Act1998		Working in partnership with Academic Schools to ensure that information on student non- academic and academic performance is securely and systematically used to support a student's continuation on the course, within the requirements of the Data Protection Act 1998

APPENDIX 14:Stage two: A Discourse analysis and thematic analysis of University of Worcester

Note: The orange text is the thematic analysis coding
The colour red refers to 'messages', green refers to 'assumptions' and blue refers to 'form'.

What is Asperger Syndrome? (Using questions that show empathy, knowledge about autism and questions to frame information) (Form of the language used to refer to autistic students)
Asperger Syndrome is a form of autism which is a lifelong disability that affects how a person makes sense of the world, processes information and relates to other people. (Communicating an understanding of autism by giving a definition or description of autism)

Autism is often described as a 'spectrum disorder' (Communicating that no two students are alike) (Communicating an understanding of autism by giving a definition or description of autism) because the condition affects people in many different ways and to varying degrees (Communicating an understanding of autism in terms of its impact on students) (Viewing autistic students in terms of their abilities/disabilities and difficulties)

Asperger syndrome (Form of the language used to refer to autistic students) is mostly a 'hidden disability' This means that you can't tell that someone has the condition from their outward appearance. People with the condition tend to have difficulties in three main areas: (Assuming that students with autism have 'issues' in certain areas)
• Social interaction – difficulty with social relationships, e.g. appearing aloof and indifferent to others (Assuming that students with autism have 'issues' in certain areas)
• Social communication – difficulty with verbal and non-verbal communication, e.g. not fully understanding the meaning of common gestures, facial expressions or tone of voice (Assuming that students with autism have 'issues' in certain areas)
• Imagination - difficulty in the development of interpersonal skills and imagination, e.g. having a limited range of imaginative abilities, possibly copied and pursued rigidly and repetitively (Assuming that students with autism have 'issues' in certain areas).

While there are similarities with autism, people with Asperger syndrome (form of the language used to refer to autistic students) have fewer problems with speaking and are often of average, or above average, intelligence. They do not usually have the accompanying learning disabilities associated with autism, but they may have specific learning difficulties. These may include dyslexia and dyspraxia or other conditions such as attention deficit hyperactivity disorder (ADHD) and epilepsy (Assuming that students with autism have 'issues' in certain areas) (Communicating an understanding of autism by giving a definition or description of autism) (Communicating an understanding of autism in terms of its impact on students) (Viewing autistic students in terms of their abilities/disabilities and difficulties).

With the right support and encouragement, people with Asperger syndrome (Communicating an understanding of autism by giving a definition or description of autism) can lead full and independent lives (Considering autistic students as receiver of support) (Communicating an understanding of autism in terms of the services autistic students are presumed to need) (Extracts taken from The National Autistic Society and SCIPS websites - 2009).

Examples of support available to students with Aspbergers (Communicating an understanding of autism by giving a definition or description of autism) **at the University of Worcester** (Considering autistic students as receiver of support) (Form of the language used to refer to autistic students):

- Assistance with applications for the Disabled Students Allowance (Advice on applying for DSA) (Assuming that autism comes with an added cost to the individual) (Communicating an understanding of autism in terms of the services autistic students are presumed to need)
- Access to a qualified Mental Health Advisor (Disability advisor) (Assuming that autistic students have support needs)
- Assistance in note taking in lectures and seminars (Note taking) (Assuming that autistic students have support needs)
- Opportunity to attend a university induction a few days early in a small group environment (Transition services)) (Assuming that autistic students have support needs) (Communicating educational placement and provision)
- 1-to-1 specialist academic support sessions tailored to meet the individual need (Study Skills sessions) (Assuming that autistic students have support needs)
- Extra time allowance in exams (Exam arrangement) (Assuming that autistic students have support needs))
- Loan of computer equipment if needed (Assistive technology) (Assuming that autistic students have support needs).

Additional information and useful websites: (links to external support)
The SCIPS web resource provides Strategies for Creating Inclusive programmes of study. Searchable by disability and/or subject.
www.scips.worc.ac.uk/disabilities/autism.html#bottom2
The National Autistic Society website is very useful as it includes extensive information about autism and Asperger syndrome and the services available.
www.nas.org.uk/asperger
SKILL – This Is the National Bureau for Students with Disabilities.
www.skill.org.uk/

APPENDIX 15: Stage two: A Discourse analysis and thematic analysis of KSU (2013)

Note: The orange text is the thematic analysis coding
The colour red refers to 'messages', green refers to 'assumptions' and blue refers to 'form'.

Services for autistic students at KSU (Form of the language used to refer to autistic students):

The university aims to offer efficient, all-encompassing services to students with disabilities with the goal of enabling students to adapt to university life and reach their full potentials (Considering autistic students as receivers of support)

The Special Needs Centre's vision is to specifically concentrate on serving university students with special needs (Dean of Student Affairs, 2015b). (Form of the language used to refer to autistic students). Its mission is to offer full services to these students, as well as offering programs and activities that help them develop and improve their skills to achieve their highest levels of excellence (Considering autistic students as receivers of support) (Dean of Student Affairs, 2015b).

Autism Disorder
'Autism spectrum disorder: Autism is a developmental disorder caused by neurodegenerative dysfunction in the brain' (KSU, 2013: 11) (Communicating an understanding of autism by giving a definition or description of autism)

A student with autism is eligible for services in either of the following cases: (Form of the language used to refer to autistic students)
In the case of having received educational services in secondary school, the student remains eligible for services. It is important that the student provides the required documents to the Special Needs Centre, including a copy of the individual educational plan. These documents should not be older than three years (Using an imperative tone). The Centre has the right to request new tests and reports if the report submitted is older than three years.

   The case of having a diagnosis of autism from an authorized body grants the student eligibility to services (Providing broad or limited disability services)

- The diagnostic report must be from a specialist certified in diagnosing autism (Using an imperative tone)
- The report must include the name, position and qualification of the specialist. In addition, the report must include the date the diagnostic test was conducted (Using an imperative tone)
- The report must be recent, meaning it has been issued within the past three years (Using an imperative tone)
- The report must clarify the reasons for diagnosis (Using an imperative tone)
- The report must include the student's diagnosis and the severity of his or her condition (Using an imperative tone)
- The report must include recommendations regarding the required services based on tests results and clinical observation (Using an imperative tone).

Educational services provided:

Support for faculty at the university (Supporting staff and/or faculty) (Assuming that autistic students have support needs)

- **The aim of the service:**

This service aims to support faculty in a way that enables them to practice their roles in facilitating students' access to the university curriculum (Assuming that autistic students have support needs)

- **The nature of the service:**

This service includes the following:

Providing information to faculty about the nature and characteristics of the autism, as well as the needs of university students with autism. (Assuming that autistic students have support needs) (Supporting staff and/ or faculty)

1) Educating faculty and staff (including staff in the office of Deanship of Student Affairs and other offices) about the services provided by the Special Needs Centre. (Assuming that autistic students have support needs) (Supporting staff and/ or faculty) (Providing training for staff and peers)

2) Coordinating with faculty about special services for students with autism during the academic year, as well as the adjustments provided for them (Communicating an understanding of autism in terms of the services autistic students are presumed

to need) (Assuming that autistic students have support needs) (Communicating educational placement and provisions)

3) Providing faculty with strategies to aid in adopting teaching practices to meet the needs of students with autism (Assuming that autistic students have support needs) (Supporting staff and/ or faculty)

4) Creating opportunities for faculty to discuss issues facing them when dealing with students with autism and answering their questions and enquiries. (Assuming that autistic students have support needs) (Supporting staff and/ or faculty)

- **How these services are provided:**

The Special Needs Centre cooperates with a team that specializes in teaching students with autism in order to prepare materials on what autism is, what services are provided by the Centre and how to implement necessary strategies to modify the curriculum (Communicating teamwork within the university and with outside organisations). These materials are distributed to all departments at the university to be delivered to the faculty. In addition, the Special Needs Centre provides small workshops and regular meetings to educate faculty about autism, to explain the services provided by the Centre and to provide necessary strategies for modifying teaching practices (Communicating teamwork within the university and with outside organisations). They will also answer any faculty enquiries. (Supporting staff and/ or faculty)

Academic advising (Study advisor) (Assuming that autistic students have support needs)

- **The aim of the service:**

Academic advising aims to facilitate the student's academic progress according to course requirements, as well as the student's desires and abilities (Communicating an understanding of autism in terms of the services autistic students are presumed to need) (Communicating educational placement and provision) (Assuming that autistic students have support needs)

- **The nature of the service:**

Helping students in choosing programmes and courses

- **How the service is provided:**

The academic advisor cooperates with an autism specialist and the student's college mentor to help the student choose programmes or courses

(Communicating teamwork within the university and with outside organisations)
(Communicating an understanding of autism in terms of the services autistic students are presumed to need) (Assuming that these students have support needs)

1. **Academic support** (Communicating an understanding of autism in terms of the services autistic students are presumed to need) (Assuming that autistic students have support needs)

   - **The aim of the service:**
     Academically supporting students with autism (Assuming that autistic students have support needs) (Communicating an understanding of autism in terms of the services autistic students are presumed to need)

   - **The nature of the service:**
   Supporting the student through peer tutoring, note-taking during lectures and providing a FM device (Peer Mentor Scheme) (Note taking) (Assistive technology) (Assuming that autistic students have support needs)

   - **How the service is provided:**
   The Special Needs Centre cooperates and liaises with the departments in which students need the services (Communicating teamwork within the university and with outside organisations) (Assuming that autistic students have support needs)

   - **Educational Facilities** (Communicating an understanding of autism in terms of the services autistic students are presumed to need) (Assuming that autistic students have support needs)

   - **The aim of the service:**
   Enabling students with autism to demonstrate their achievements within the scope of their abilities (Viewing autistic students in terms of their abilities/disabilities and difficulties)

   - **The nature of the service:**
   Facilitating the process of assessing the performance of students with autism within the context of their needs. This could include providing extra time for assignments or exams providing a diverse array of alternative methods for assessing students' performances and creating exams that do not include essay questions (Exam arrangements) (Assuming that autistic students have support needs)

   How the service is provided:

The Special Needs Centre cooperates and liaises with departments and faculty to provide the services autistic students need (Communicating teamwork within the university and with outside organisations) (Assuming that autistic students have support needs) (Form of the language used to refer to autistic students)

2. **Related services**
   - **The aim of the service:**
   Enabling students with autism to fully engage in academic activities associated with their studies (Assuming that autistic students have support needs)
   The nature of the service:
   Providing a wide variety of assistive technology, including the use of such technology for note taking (Assistive technology) (Communicating an understanding of autism in terms of the services autistic students are presumed to need) (Assuming that autistic students have support needs)
3. Providing the student with the opportunity to work with an assistant teacher at home, if needed, at their own cost (Communicating an understanding of autism in terms of the services autistic students are presumed to need) (Assuming that autistic students have support needs) (Assistant teacher)

   - **How the service is provided:**
   The Special Needs Centre cooperates and liaises with departments to provide this service (Communicating teamwork within the university and with outside organisations)

4. **Social services** (Social skills training) (Communicating an understanding of autism in terms of the services autistic students are presumed to need)) (Assuming that autistic students have support needs)
   - **The aim of the service:**
   Assessing the student in social interactions and academic progress and providing independence training to students with autism, through the assistance of Special Needs Centre teams.(Assuming that autistic students have support needs) (Communicating an understanding of autism in terms of the services autistic students are presumed to need)

- **The nature of the service:**

Developing students' social skills and helping them adapt to the university environment while enabling them to develop the ability to solve their own problems. (Assuming that autistic students have support needs)

- **How the service is provided:**

5. A case study is prepared for each student. They are provided with assistance in making positive relationships with others. The Centre introduces students to the university environment and facilitates the process of making adjustments to the environment to meet their needs. They help students acquire social skills while training the university community to develop skills to accommodate students with autism. In some exceptional cases, the student is also trained in self-reliance (Assuming that autistic students have support needs)